



Profiling value added position in FM

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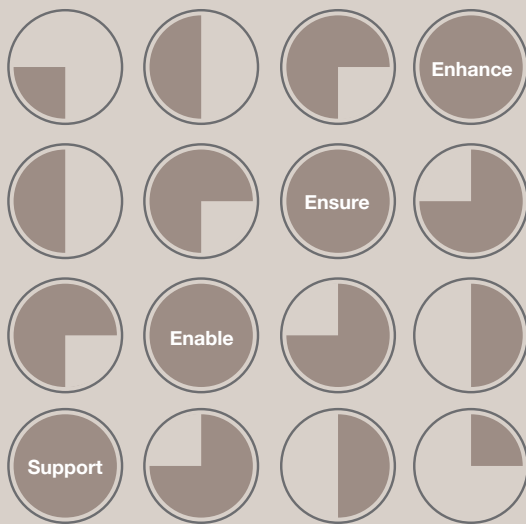
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Profiling value added position in FM



PhD thesis 8.2013

DTU Management Engineering

Akarapong Katchamart
May 2013

PROFILING VALUE ADDED POSITION IN FM

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RESUMÉ

Profilering af merværdi positioner i Facilities Management

Afhandlingen giver et forskningsbaseret bidrag til den igangværende faglige debat blandt akademikere og praktikere inden for Facilities Management (FM) om, hvorvidt og hvorfor FM bør etableres som en ledelsesmæssig position, der fungerer som en strategisk virksomhedsmæssig aktør. Der argumenteres i afhandlingen for, at det at være strategisk, ikke er en nødvendig forudsætning for at skabe merværdi for virksomheder og interessenter. Det essentielle er at finde den rette kombination mellem på den ene side, hvad FM organisationen tilbyder – dvs. FM produktet, og på den anden side med, hvordan dette bliver leveret – dvs. FM processen. Det drejer sig således om at matche FM produktet med den rette proces,

Med udgangspunkt i omfattende litteraturstudier, og på grundlag af 7 case studier af private og offentlige organisationer fra Danmark, Holland, Hong Kong og Thailand, analyserer afhandlingen, hvordan FM organisationer bedst kan skabe merværdi. Gennem analysen udkrystalliserer følgende fire merværdi positioner sig:

1. Støtte – FM organisationen bidrager med fordele til værtsorganisationen, baseret på specialisering og stordriftsfordele
2. Muliggøre - FM organisationer bidrager med engangsforbedringer af værtsorganisationens kapacitet og kapabilitet
3. Sikre - FM organisationen bidrager med at tilgodese virksomhedens kontinuerlige funktion og pålidelighed
4. Styrke - FM organisationen påvirker virksomhedens produktivitet og resultater

Hver type af merværdi kræver, at specifikke betingelser og forudsætninger er til stede. Afhandlingen tilbyder et visuelt værktøj, "FM Produkt-Proces Matrix", til at hjælpe praktikere med at identificere deres nuværende vilkår og situation samt evaluere deres aktuelle FM merværdi position og fastlægge en eventuel fremtidig mere favorabel position. Værktøjet kan anvendes til at indramme og redefinere den løbende dialog mellem FM praktikere og relaterede interessenter, både for interne FM organisationer og for eksterne leverandører.

Forskningen bidrager med at afklare det vanskeligt definerbare begreb "merværdi" i relation til FM organisationer og aktiviteter. Resultaterne forventes at medvirke til en dyberegående ledelsesmæssig forståelse og diskussion af FM organisationers evner og potentialer. Resultaterne kan, udover FM-området, ligeledes finde anvendelse inden for ledelse af andre serviceindustrier og -funktioner.

SUMMARY

PROFILING VALUE ADDED POSITION IN FM

The dissertation is a research based contribution to the on-going professional discussion among researchers and practitioners within Facilities Management (FM) about whether and why FM organizations should be established with a managerial position which can act as a corporate strategic player. It is argued that being strategic is not the pre-requisite condition to add value to the core business and stakeholders but rather matching what does FM organization offer - so called FM product - with how does it being offered - so called FM process? By matching FM products with the right FM process, FM organizations can best add value.

Based on comprehensive literature studies and 7 case studies of private and public organisations from Denmark, Holland, Hong Kong and Thailand, the dissertation analyses, how FM organizations can best create added value. From the analyses the following four value added positions have emerged:

1. Support - FM organizations create benefit to its host organization from economies of scope and scale
2. Enable - FM organizations increase the one-off organizational capacity and capability
3. Ensure - FM organizations contribute the business continuity and reliability
4. Enhance - FM organizations influence the business productivities and outcome

Each type of value added requires specific conditions and contingencies involved. This research thus offers a visual aid tool, "FM product-process matrix", to assist practitioners to indicate their existing circumstances and contexts and assess the current FM value added position and project for the next desirable value added position. It can be used to frame and re-frame the continual dialogue between related stakeholders and FM practitioners, both internal FM organization and external service providers.

The research unfolds the unarticulated notions of added value from FM organization and activities. It will broaden the managerial perception and discussion on FM provision 's abilities and capabilities. The results are besides the field of FM also of relevance for management of other service industries and functions.

CHAPTER 1: INTRODUCTION

MOTIVES

Michael Porter's organizational value chain (Porter, 1980) distinguishes organizational activities that contribute financial benefit to the company as a core business for examples inbound logistics, marketing and sales, operations, and service. And activities that do not contribute the monetary value to the organization as support functions for example, firm infrastructure, human resource management (HRM), information technology (IT), procurement and facilities management (FM). Since, the notion of value chain dominates the general management practices, senior managements decipher organizational support functions that create the non-monetary value, and are thus considered as a cost center. From traditional reason for existence of FM functions for the corporation is to provide the expected facilities-related services and provision that supports the operation of organizational primary activities. Cost reduction becomes the only financial value contribution to an organization by increasing the efficiency of FM functions and activities.

A demand-supply driven coordination is weaved FM organization as a supply side and its host organization as a demand side with the contractual term such as service level agreements (SLAs) or key performance indicators (KPIs) that identify what FM commits to delivering rather than what each hopes to gain from the partnerships (Kaplan, et.al., 2010). Kaplan, et.al. suggest that those contractual agreements emphasize operational metrics rather than strategic objectives, and sometimes do not reflect the reality of a fast-changing business landscape. Facilities managers, who are the coordinators between their client's strategy and FM implementations, simply focus on achieving the operational agreement targets instead of working across organizational boundaries to make the alliances a strategic success.

FM researchers and practitioners believe that if FM organizations closely collaborate with stakeholders such as clients, business unit managers and end users, they are capable of delivering FM products and solutions that match more fit with stakeholder's needs. One of the collaborative approaches is "to be more strategic" (Grimshaw, 1999, Then, 2003, Yiu, 2008), which widely proliferates in FM academic and seminal works since the last decade. They suggest that FM organizations need to incorporate itself into the corporation's strategic planning process. In practice, they still do not fully succeed to establish FM organizations in the senior management's perception and consideration. FM practitioners have suffered from failure to posit itself in the strategic level. FM academia and practitioners believe that in order to deliver added value to the core business of its host organization, FM organizations have to leverage its managerial position up to the strategic level because FM needs to be more visible among senior managements by highly engaging in strategic decision process. They forgot the most important thing- what do stakeholders really want. The main explanation to clarify why corporate boards underrate the importance of FM functions is that FM practitioners could not elaborate the value added delivering from FM functions to their core business. When corporate boards do not perceive and acknowledge FM contributions, FM would not be included into their strategic decision making process.

But there is a shortage of understanding on the demand side for instance:

- The role and influence of primary stakeholders on FM organization during service specification process,
- The key success factors on FM provision arrangement
- The characteristic of organizational primary activities that influences on the interdependence of core business and FM functions.

FM academia overly focus on leveraging the managerial hierarchy of FM organization to the strategic level without being aware of what are the stakeholder's and core business expected outcomes from FM functions.

According to Theodore Levitt (Christensen and Raynor, 2003)., legendary Harvard business school marketing professor, "People don't want to buy a quarter-inch drill, they want a quarter-inch hole", Marketers have lost the forest for the trees, focusing too much on creating products for narrow demographic segments rather than satisfying needs. The job, not the customer, is the fundamental unit of analysis. If we believe in this marketing manifesto, the main FM's job thus is to fulfill the stakeholder's and core business's expected outcomes. And each type of them requires different approaches and associated circumstances. The main motive to conduct this research is to investigate what are the contexts and circumstances that FM organizations can best add and deliver valuable FM service and provision to the core business and related stakeholders.

OBJECTIVES

There are three main objectives that have emerged from the mentioned motive:

This study searches for **the "other" reasons for existence of FM functions** in their host organization besides cost reduction. It attempts to widen the traditional role of FM by exhibiting that FM organizations possess competitive calibers and competencies to create added value to their host organization's core business and surroundings. It will re-define the perception and understanding toward FM 's roles and responsibilities to FM's stakeholders.

This study also aims to **debunk the management fashion** from FM academia and practitioners by arguing that being strategic is not necessarily the prerequisite condition for adding value to stakeholders. But rather that FM organization has to match what they are going to offer to the given stakeholders with the right pathways. Some particular FM's offerings may not need to be involved in the strategic decision process at the corporate level while some may need to. In order to add value to their stakeholders, FM practitioners should shift away the focus of study from leveraging FM's managerial hierarchy to searching for what stakeholders really need from FM functions.

The FM value map (Jensen, 2010) shows that impacts from FM functions and activities are not only cost benefit but also adding value such as end user satisfaction, primary activities' productivity and operational reliability. A FM value map depicts what capacities and capabilities of FM functions can supply and accommodate to the needs from a demand side. In order to characterize what are the most appropriate contexts and circumstances for FM organizations to add value to their stakeholders, this research aims to put forward the FM value map by **profiling determinant factors** that influence value adding process. These can

be varied based on the nature of core business, primary activity's requirements, the needs of stakeholders, organizational culture, the interdependence between core business and FM organization.

The determinant factors will be visualized by a **FM product-process matrix** that illustrates FM value added position which is the relative value delivering position from the FM organization to its stakeholders. This decision making matrix can be used to assess the existing FM value position choice and project for the next desirable value position. It can be used to reframe the dialogue between stakeholders and facilities managers both from the internal FM organization and to service providers.

RESEARCH QUESTION

The research starts with the main research question: **How FM can best add value to its stakeholders?**

This aims to investigate and characterize when FM organizations can be best add value to different types of stakeholders. To unfold the main research question, the sub research questions are:

1. **What are FM 's specialized abilities that create and add value?** This question aims to investigate FM 's core competencies and capabilities that create added value to core business and surroundings.
2. **What are the added values from FM 's specialized abilities?** This question aims to define the value added by FM to its stakeholders.
3. **What are the appropriate context and circumstances to add value focusing on what type of FM product and how is FM product being offered (FM process)?** This question aims to profile the characteristic of value adding process and to search for under which circumstances FM can best add value to its stakeholders.
4. **What are the role and influence of stakeholders on value adding process?** This question aims to explore the role and influence of stakeholders upon FM value adding process.

ACADEMIC IMPLICATION

Besides strengthening the body of FM knowledge and literature, this contribution broadens the existing perception of FM's role and responsibilities in the given organizations from supportive role to other possible roles. It provokes a long lasting practice and academic discussion on being strategic that whether it is still necessary to pursue the higher managerial level in the organization or not. This suggests that FM organizations should rather search for the appropriate pathway to deliver what stakeholders really need which may or may not be at a strategic level. If so, FM researchers should evolve their focal interest from leveraging managerial position to other topics that substantially adds value to the core business and related stakeholders.

PRACTICAL IMPLICATION

The research offers the product-process matrix as a visual aid for FM practitioners to map out the best value added position in the given contexts. It helps FM practitioners to identify their FM functions in client's organizations, who are their primary stakeholders, what type of FM product they offer to them, how FM

products are going to be offered, what types of a current value added position and what is the next better value added position? FM practitioners can use this normative matrix as starting point to initiate and facilitate the dialog as a self – assessment within FM organization and staffs and to communicate with their targeted stakeholders such as client, customer and end users. This versatile matrix can be applied to investigate the value added positions not only in FM-related context but also other organizational support functions such as HRM, ICT, and finance.

DEMARCATIION 1: FACILITIES MANAGEMENT

Commonly used FM terminologies in this dissertation are defined as follows:

FM activities cover asset management, workplace management and FM services (CEN, 2010).

FM product is conceptualized as individual and/ or bundles and/ or portfolio of FM related contributions that support and accommodate the primary activity of the organization and its properties. It can be FM provisions (software) and materials (hardware), for instance services, physical assets, performance, managerial knowledge, technical knowhow, tools, and consumables. The scope of FM product encapsulates not only building operation and maintenance but it also includes workplace, facilities, support services, property, corporate real estate and infrastructure.

FM process is an act of effort from the FM organization to deliver its FM products to its stakeholders. This is the collaborative relationship between FM organizations with its demand side which focuses on how FM organizations offer FM products to its clients? And how do clients perceive FM product offering?

The position of FM organization in the host organization is non-core business which means any of FM activities could not directly generate business outcome to the organizational bottom lines for example revenue in private sector and well-being in public sector. FM organizations acting as a core business are out of this research's focus. For instance, given business-contexts, they might perceive FM function as a main driver for generating business income and value for example, gamblers come to casino to use casino's facilities, visitors come to amusement park to experience amusement park's facilities and weekenders visit hotel to use hotel's facilities.

DEMARCATIION 2: STAKEHOLDERS

The research delineates the main responsibility and impacts of FM functions and activities are incorporated within its host organizational value chain. The **internal stakeholders** within the organizational value are the principle focal groups of this research. The external stakeholders such as the local community, society at large are out of unit of analysis. The term "stakeholder" is defined as a person or a group who "can affect" and "is affected by" criteria, Freeman (1984). FM stakeholders, thus, refers to any group or individual who can affect or is affected by FM functions and activities. They are divided into two groups: demand and supply sides.

The demand side consists of (CEN, 2010):

- Client is the senior management at the strategic level who represents the rest of the stakeholders.
- Customer is the representative of each business unit at the tactical level such as production, R&D, finance, marketing, human resource, information technology and operation.
- End user is anyone who directly perceives and utilizes FM services and provision.

The supply side is FM organization that refers to both in-house FM organization and out house FM service provider who holds the specialized FM knowledge and expertise. It is an umbrella term using the classification of Williams (1996) encapsulating the following categories:

- Total in-house FM organization;
- Outsourcing as “single”, “bundled” or “packaged” contractors;
- Total facilities outsourcing: Management contractors;
- Total facilities outsourcing: Managing agent.

This research extends Williams (1996)’s FM organization by adding **FM blue collar staffs** that conduct FM activities at the operational front line and directly interact with end users as a part of a FM organization.

RESEARCH DESIGN

This research constructed a conceptual framework from *selected literatures*, presented its applicability through exemplary FM *case studies* and polishing by *targeted FM practitioner’s feedbacks*.

The selected literatures were narrowed into **FM literature**, transaction cost economic (TCE) in particular **asset specificity**, and stakeholder management in particular **stakeholder influenced strategy**. In order to outline the state of the art of FM studies, this research investigated the **FM literatures** focusing on added value of FM, the relationship between FM as a supply side and its stakeholder as a demand side, and FM organizational strategies. In general management studies, the asset specificity theory is used to explain the rationale behind the strategic decision making on whether, what, and why or why not to outsource organizational support functions such as finance consultancy, HR services and ICT. But there is a lack of discussion and research using this theory in FM. The role and influence of stakeholders on value adding process was examined through a theory of stakeholder influenced strategy.

Seven FM case studies were selected by maximum variation criteria from 3 sectors and 4 countries that aim to broadly exemplify the applicability of the conceptual framework. They consist of public, private and state owned sectors for instance, LEGO (private sector), Dutch central government (public sector) and Hong Kong science and Technology Park (state-owned sector). From empirical data of seven case studies, they were manufactured into six self-contained papers. Each of them has its individual research question and corresponds with the main research question. Each paper employs empirical data from a central data pool. Thus one case study was applied to more than one paper as show in table 1.

Table 1: Seven case studies in relation to six papers

Paper	LEGO	MÆRSK	ENCO	PTTEP	DAD	DUTCH	HKSTP
Understanding added value of facilities management from asset specificity perspective	×	×	×	×	×	×	×
Mapping value added positions in facilities management by using a product-process matrix	×	×	×		×	×	×
Stakeholder influenced strategy in FM: A case study of energy complex (ENCO)			×				
The Concept of Intra-Organizational Corporate Social Responsibility for Facilities Management							
Blue collar FM workers as a primary stakeholder: a case study of CSR practices				×			
FM shared services: an emerging concept of FM provision arrangement			×		×	×	×

The proposed framework were amended and polished based on **the constructive feedbacks from FM practitioners**. Fifteen FM practitioners were targeted on the membership of Danish Facilities Management Network (DFM) because of the availability and logistic reasons. These three steps of data collection can be considered as a triangulation research that combine three different approaches (literature review, case studies, and expert panel) to construct the conceptual framework.

STRUCTURE OF THE DISSERTATION

The dissertation consists of six inter-connected papers and each of them is linked by a binding chapter that summarizes and merges them into one single body. The main focus of the dissertation centralizes to the proposed FM product-process matrix by starting with the developing of FM product-process matrix, following with applying the matrix through seven exemplary cases and concluding with the discussion on the applicability and implications of the matrix. Table 2 below shows the connections between main research question, sub- research question and purposes of three research papers.

Table2: the relation between research questions and three papers

Main research question	Sub- research question	Purpose	Paper
How FM can best add value to its stakeholders?	What are FM 's specialized abilities that create and add value?	Defining added value from FM functions and their activities	Paper 1: Understanding added value of facilities management from asset specificity perspective
	What are the added values from FM 's specialized abilities?		
	What are the appropriate context and circumstances to add value focusing on what type of FM product and how is FM product being offered (FM process)?	Profiling the best value adding contexts and circumstances	Paper 2: Mapping value added positions in facilities management by using a product-process matrix
	What are the role and influence of stakeholders on value adding process?	Underpinning the role and influence of stakeholders	Paper 3: Stakeholder influenced strategy in FM: A case study of energy complex (ENCO)

Six papers are divided into two groups: paper 1-3 aims to be used as an overarching cross case analysis to present the seven case studies in chapter 4. **Paper 1** (*Understanding added value of facilities management from asset specificity perspective*) proposes seven FM-related specialized abilities that add value to the host organization 's core business and surroundings. **Paper 2** (*Mapping value added positions in facilities management by using a product-process matrix*) identifies four types of value added positions from FM-related specialized abilities. **Paper 3** (*Stakeholder influenced strategy in FM: A case study of energy complex (ENCO)*) exhibits the role and influence of stakeholders during value adding process. Paper 4-6 are the supplementary that amplifies the functionalities and the conceptual framework as shown in table 3 below. **Paper 4** (*The Concept of Intra-Organizational Corporate Social Responsibility for Facilities Management*) outlines the scope of FM responsibilities only within the host organizational value chain. **Paper 5** (*Blue collar FM workers as a primary stakeholder: a case study of CSR practices*) shows value adding by collaborating between in-house FM organization, external FM service providers and HR department. **Paper 6** (*FM shared services: an emerging concept of FM provision arrangement*) shows value adding by consolidating the redundancy of FM functions and activities across different departments into single management entity.

Table3: Exemplifying the added value of FM with three papers

Paper	Purpose
Paper 4: The Concept of Intra-Organizational Corporate Social Responsibility for Facilities Management	Outlining the scope of FM responsibilities
Paper 5: Blue collar FM workers as a primary stakeholder: a case study of CSR practices	Creating FM knowledge by collaboration of FM in house, service provider and HR department
Paper 6: FM shared services: an emerging concept of FM provision arrangement	Presenting a new concept of FM provision arrangement

CHAPTER 2: RESEARCH DESIGN

Recently, the research and discussion of added value in FM increasingly became more popular in seminal works because FM researchers and practitioners believe that as an entity and function in the organization, FM has “a lot more to offer” than just cost reduction to the operation of core business and business outcome. From the main research question of this study, how FM can best add value to its stakeholders, it is also another attempt to investigate the possibility (ies) of an FM organization to add value and to search for the potential contexts that FM can best add value to the core business and related stakeholders. By nature, a characteristic of this research is exploratory, because the research involves an issue where there are very limited earlier comprehensive studies in FM academic discussion. Collis and Hussey, (2003) explain that the aim of exploratory research is to look for patterns, ideas or hypothesizes, rather than testing or confirming a hypothesis. This research is considered as an interpretative paradigm rather than a positivist paradigm because the purpose of this study is to increase the basic understanding of added value of FM that creates impact to the core business and surroundings.

The research investigates which existing theories and concepts in FM that can be applied in the research problem or whether new ones should be developed. The main focus of the FM literature covers:

- Value added from FM products to core business and related stakeholders
- The relationship and interrelationship between the FM organization and its stakeholders, particularly internal stakeholders such as clients, customers, service providers and end users
- The strategic decision behind FM provision arrangement strategies such as total FM, in-house, outsource and FM shared services

As such, an exploratory research rarely provides conclusive answers to problems or issues, but gives guidance on what future research, if any, should be conducted. In exploratory research, the focus is on gaining insights and familiarity with the subject area for more rigorous investigation at a later stage. The qualitative approach is to address a research question and design that involves collecting qualitative data and analyzing them using interpretative methods. The empirical evidence was qualitative data mainly collected by semi-structured interviews and observations from the seven FM organizations.

METHODOLOGICAL TRIANGULATION

With the explorative nature of the research question, this research has used three different research methodologies from given purposes, so called methodological triangulation research. Methodological triangulation research is the use of multiple sources of data, different research methods to investigate the same phenomenon in this research. This can reduce bias in data sources, methods and investigators (Jick, 1979). In order to be consistent in the result and validity of the research selected, three methodologies were chosen from the same research paradigm. Triangulation assists this research in increasing the reliability of the results, enabling the study to get the more comprehensive view of the research subject. This is in line

with Yin (2003), who asserts that any finding or conclusion in research is likely to be much more convincing and accurate if it is based on several different sources of information following corroborative evidence. According to Yin, the main advantage of triangulation is the development of converging lines of inquiry. Huberman and Mile (1994) support that as “self-consciously setting to collect and double check findings”. As described, the combination of the following methodologies allowed for a development and amendment of the research questions. The three selected methodologies are explained as follows:

1. Literature review

A purpose of literature review is to critically evaluate the state of the art of the body and discussion of FM knowledge on the research problem including the reflection on relevant literatures. The scope of literature review focuses on three areas 1. Transaction Cost Economy (TCE) in particular with asset specificity, 2. Stakeholder Management in particular with Stakeholder influenced strategy and 3. Facilities Management in particular with added value of FM product and the relationship between FM’s demand and supply sides. It includes stating the main research question and hypothesis within the research question and objectives for example asset management, real estate management, property management, stakeholder management and relationship management. The proposed theoretical framework, FM product-process matrix, was formulated and developed from this research stage. The FM product –process matrix is the overarching framework for the analysis of seven case studies relating the research question.

2. Case study

A purpose of case study in this research is to explore a single phenomenon relating to the research question from the selected cases in a natural setting using a variety of methods to obtain in-depth knowledge. The implication and applicability of the FM product-process matrix will be investigated and exemplified through seven selected FM organizations. The case selection criterion is maximum variation covering public, private and state-owned sectors aiming at depicting the matrix applicable and to generate the research discussion. The importance of each case’s context is essential as Yin (2003) identifies the characteristics of case studies as follows:

- The research aims not only to explore certain phenomena, but also to understand them within a particular context.
- The research does not commence with a set of questions and notions about the limits within which the study will take place.
- The research uses multiple methods for data collecting, which may be both qualitative and quantitative.

The empirical data collection was carried out by semi- structured interview with both *demand side* such as client, customer and end users and *supply side* such as in house FM related managers from strategic, tactical and operational levels including FM service providers. The main interview theme focuses on an aligning of perception from demand side and implementation from supply side on added value of FM for instance: Value added from FM service and provision to core business and surroundings, the relationship

and involvement between FM organization and its internal stakeholders such as client, other business units, external service providers and end users and FM provision arrangement strategy. This research also investigates the role and influence FM's stakeholders from four groups of internal stakeholders:

1. FM practitioners, for instance internal FM manager that supervises and operates FM services on a day-to-day basis,
2. Representative of strategic level of the organization such as chief executive officer (CEO) and /or chief financial officer (CFO) who are considered as a client of FM practitioners,
3. Representative of tactical level of the organization such as head or appointed person of the organizational business units who are acted as a customer of FM practitioners and
4. End users who receive the day-to-day FM performance and activities.

This research was conducted with 23 interview appointments and the approximate duration of each appointment was 1- 2. 5 hours. Table 1 below shows the case relevant details.

Table 1: seven cases from four countries

Case	Country	Time	Number of interview/ visit
LEGO	Denmark	May- Sep 2010	2
MÆRSK	Denmark	Jan- Apr, 2011	3
ENCO	Thailand	June, 2011	6
PTTEP	Thailand	June, 2011	4
DAD	Thailand	June, 2011	3
Dutch Central government	Netherlands	April, 2011	3
HKSTP (Hong Kong Science and technology park)	Hong Kong, SAR	Feb- May, 2012	2

3. Focus group

Pre-understandings and finding from a product-process matrix were rectified and amended by a focus group of 15 FM practitioners from the Danish Facilities Management association (DFM). Before the focus group workshop, participants were invited to read the summary of the proposed FM product- process matrix. This is a process of comparing and checking the results of different sources of information, thus providing valuable feedback. It aims to obtain as full a range of perceptions and experiences of using a product-process matrix as possible of the issues or phenomenon of interest. Focus groups are used to gather data relating to the feelings and opinions of the group of people who are involved in a common situation or discussing the same phenomenon. For this research context, the group of people was FM practitioners with experiences from Nordic and European FM industry. A focus group is a methodology that combines interviewing and

observation, but allows fresh data to be generated through the interaction of the group. Focus groups can be useful for a number of purposes such as to, Collis and Hussey, (2003):

- Develop knowledge of a new phenomenon
- Generate propositions from the issues that emerge
- Develop question for a survey
- Obtain feedback on the findings of research in which the focus group members participated.

Under the guidance of a group facilitator, selected participants are encouraged to discuss their opinions, reactions and feelings about the proposed FM product-process matrix. During the workshop, the participants were invited to work as group discussion on the application of the matrix. This helps produce “data and insights that would be less accessible without the interaction found in a group” (Morgan, 1988) by listening to other group members’ views stimulates participants to voice their own opinions.

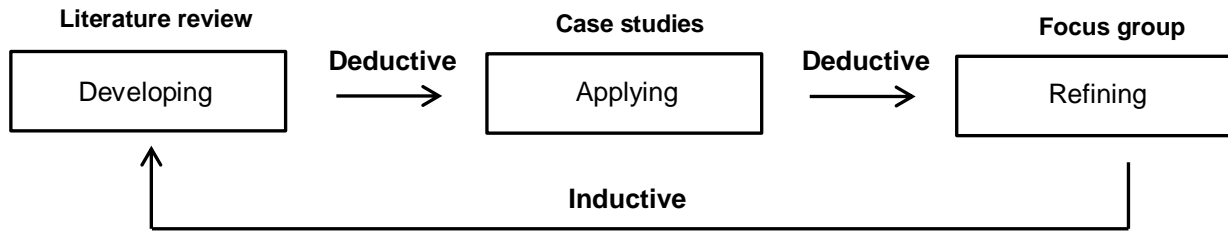
RESEARCH REASONING

There are three types of research reasoning:

1. Deductive reasoning focuses on extracting statements from general knowledge in order to test these statements on the basis of facts and its central to positivism. As Perry et al. (1998) state, pure deduction might prevent the development of a new and useful theory.
2. Inductive approach reasons through moving from a specific case or collection of observations to general law (e.g. Taylor et al. 2002). As Perry et al. (1998) state, pure induction might prevent the researcher from benefiting from an existing theory.
3. Abductive reasoning lays more emphasis on empirical data and allows for more dynamic interaction between data and theory than the deductive or inductive methods. An abductive logic searches for the best explanation of an unexpected observation on the basis of incomplete data. When a new discipline begins, research methods need to aim first providing inductive insights in order to develop a central body of generally accepted theory from which useful hypothesis can later be formulated (Manning and Roulac, 2001).

Based on methodology used, this research could be characterized as an abductive reasoning that combines both inductive and deductive reasoning as shown in figure1.

Figure1 Methodologies used and research reasoning



The preliminary FM product-process matrix which was developed from literatures and was applied through seven case studies. The findings and results from this phase was further reviewed and assured by a group of 15 FM practitioners. Applying from theoretical framework to empirical evidences is considered as deductive reasoning. The formulated FM product-process matrix was refined and amended by results from case studies and focus group. Refining the theoretical framework from the empirical evidences is considered as inductive reasoning. This research, employing both types of logic in order to develop the FM product-process matrix, is considered as an abductive reasoning research.

RESEARCH OUTLOOK

The results and findings are represented through selected scientific papers. This paper-based dissertation consolidates with six self-contained papers and summaries with the linkage story. Each of them responses to the research question and sub questions and contribute to the research objectives. This research divides into two phases, first developing FM product-process matrix that is elaborated by first three papers as shown in table 2.

Table 2: Developing the FM product-process matrix the three inter-connected papers

Paper	Data collection	Methodology
Understanding added value of facilities management from asset specificity perspective	Semi-structured interview	Multiple case studies and analysis
Mapping value added positions in facilities management by using a product-process matrix	Semi-structured interview	Multiple case studies and analysis
Stakeholder influenced strategy in FM: A case study of energy complex (ENCO)	Semi-structured interview	Single case study and analysis

Second, applying FM product-process matrix that is exhibited by three individual papers as shown in table 3, it aims to explain and demonstrate the application and function of the proposed matrix.

Table 3: The applicability and implications of FM product-process matrix

Paper	Data collection	Methodology
The Concept of Intra-Organizational Corporate Social Responsibility for Facilities Management	Literature review	Literature review and analysis
Blue collar FM workers as a primary stakeholder: a case study of CSR practices	Semi-structured interview	Single case study and analysis
FM shared services: an emerging concept of FM provision arrangement	Semi-structured interview	Multiple case studies and analysis

The data analysis employs into two types of case analyses: First, within case study that each case uses the applications of a proposed matrix to exemplify the function of a matrix and second, cross case analysis that compares the usability of this matrix across particular case and given contexts.

The main outlook of this research is the FM product-process matrix that helps FM practitioners identifying the existing value added delivering, how it is formulated and identifies actions for improvement. This research can be categorized as an applied research which is a study that has been designed to apply its findings to solving a specific, existing problem. It is the application of existing knowledge to improve management practices and policies. The immediacy of the problem will be more important than academic theorizing. According to Klein and Myers (1999), the foundation assumption for interpretative research is that knowledge is gained and shared meanings. Moreover, to the emphasis on the socially constructed nature of reality, interpretative research acknowledges the intimate relationship between the researcher and what is being explored, and the situational constraints shaping this process. Additionally, this paradigm takes account of the subjective aspects of human activity by focusing on the meaning, rather than the measurement of social phenomenon, Collis and Hussey, (2003).

CHAPTER 3: FM PRODUCT-PROCESS MATRIX

The conventional existing reason of FM as an entity in its host organization is to support the primary activities operating more effectively. The role and identity of an FM organization is perceived among clients, customers and end-users at an operational level in their respective organizations (Grimshaw, 1999). In order to deliver better FM services and solutions, many FM researchers (Grimshaw, 1999, Then, 2003, Yiu, 2008) suggest that FM organizations have to be involved in their strategic decision process and to be seen and embedded in the corporate strategic level. The supportive role of FM can be defined as a key function in managing facilities resources, support services and the working environment, supporting the core business of the organization in both the long and short term (Chotipanich, 2004, Tay and Oui, 2001). Some FM researchers even assert that FM has to be core business itself (Waheed and Fernie, 2009, Yiu, 2008) with its own corporate authorities. In fact, participating in the corporation's strategic processes is neither FM's discretion nor FM's claims.

Historically, there has always been a tension between two common corporate management drivers: cost reduction and value adding. It has been widely discussed in strategic management literature that the contribution of support functions such as human resource (HR), information technology (IT) or FM is primarily cost reduction. Cost reduction is one way of value adding but FM organization and operations are branded from senior managements as cost center and their only monetary value contribution is cost reduction. Arguably, FM organizations can contribute value to its organization more than just reducing cost of operation and provision. In order to deliver the value added FM services to the core business, the FM organization must align FM services and solutions with core business needs and requirements (CEN, 2010).

Michael Porter's organizational value chain (Porter, 1980) divides business units into two building blocks: (1) Primary activities are organizational core competencies that possess the competitive advantage to surpass their business competitors. They create the monetary value to the organization and are perceived as a profit center. Examples of primary activities are inbound logistics, marketing and sales, operations, and service. (2) Support activities are an organizational non-core competency that supports the operation and production of the primary activities. They create the non-monetary value, and are thus considered from managements as a cost center. The only monetary value contribution from support activities is operational cost minimization. Examples of support activities are firm infrastructure, human resource management (HRM), information technology (IT), procurement and FM.

FM is the integration of processes within an organization to maintain and develop the agreed services which support and improve the effectiveness of its primary activities, (CEN, 2010). Services are ranging from office administrative service to workplace acquisition. Regarded as a non-organizational core competency and non-critical function, support activities such as FM activities are likely to be performed and contracted out to third parties who hold specialized knowledge and expertise. This "lean and mean" provision arrangement assists managements to streamline their focal point into conventional value added activities. This managerial perspective itself limits the boundary of FM's scope, role and function. The added value creation from FM is

only to achieve service level agreement (SLA) as promised at the minimum cost. Or other added value aspects are being neglected.

This research deployed the asset specificity theory as an overarching framework for identifying the added value in FM by comparative analysis of FM literature. Based on the level of asset specificity FM practitioners and clients formulate an appropriate organizational structure and provision arrangement. FM organizations and their clients can optimize their existing collaborative relationship corresponding with their new perception on FM provisions. It helps managements to make the decision on which FM functions that should be outsourced and / or kept in-house. And what/ under which circumstances are the most effective and efficient collaborative relationship between FM organizations and their clients?

OVERVIEW OF ASSET SPECIFICITY

Coase (1937) was the first researcher who raised the question of what drives organizational form. And he developed widely the theoretical framework referred to as transaction cost economies (TCE) and the essence of his theory is “economizing on transaction costs would determine the organization of economic activity, and the division of activity between firms and markets” (Milgrom and Roberts, 1992, p. 51). He proposed that a firm will replace the market when the costs of transacting within the firm are less than the costs of transacting through the market. The manner in which a transaction is organized depends on particular attributes of the transaction. The most influential TCE researcher (Williamson, 1979, 1985, 1996) discusses three critical transaction attributes: (1) Asset specificity; (2) Uncertainty; and (3) Frequency. According to which asset specificity was argued to be the most important factor alongside uncertainty and transaction frequency in determining the choice of governance, namely hierarchy or market.

Asset specificity was firstly described as the ‘specialized ability’ by Marshall (1949, p. 172) in the transaction relationship that is required for particular function and requirements. Williamson (1985, p. 95) who populated this term, refers asset specificity as “the degree to which an asset can be redeployed to alternative uses by alternative users without sacrifice of productive value”. TCE suggests that asset-specific investments should only be deployed on the expectation of substantial cost savings and/or value-adding advantages, but it also posits that asset specificity increases the hazards of opportunism and the transaction costs necessary to safeguard against the risk of opportunistic expropriation (Heide and Stump 1995; Parkhe 1993).

Based on the level of asset specificity, firms formulate an appropriate governance structure, with inter-firm relationship performance expected to be maximized when opportunistic behavior incentivized by asset specificity is reduced (David and Han 2004; Lui et al. 2009; Rindfleisch and Heide 1997). De Vita et al. (2011) conclude that the degree of customization is, in turn, determined by the degree of uniqueness of the assets deployed to the activities or functions being performed (Erramilli and Rao 1993; Widener and Selto 1999), and by the extent of the transferability of such assets to other activities outside that relationship to the third party (Brown and Potoski 2005; Espino-Rodríguez and Gil-Padilla 2005; John and Weitz 1988; Morill and Morill 2003; Murray and Kotabe 1999).

De Vita et al. (2011) explain the usage of asset specificity as a core concept of TCE, which is still seen as the dominant theoretical framework for studying organizational boundary choices (Geyskens et al. 2006). In particular, asset specificity has become a key construct in research into make-or-buy decisions (Espino-Rodríguez et al. 2008) and the performance of buyer–supplier relationships (Artz 1999; Haugland 1999; Heide and Miner 1992; Heide and Stump 1995; Lui et al. 2006, 2009).

SEVEN DIMENSIONS OF ASSET SPECIFICITY

As mentioned above, the focus of this study is restricted to the asset specificity dimension of TCE. Asset specificity consists of seven dimensions: (1) human asset specificity; (2) site asset specificity; (3) physical asset specificity and (4) dedicated asset specificity, to which both (5) brand asset specificity (Williamson 1985) and (6) temporal specificity (Malone et al. 1987; Masten et al. 1991) were later added. Further, Zaheer and Venkatraman (1995) added (7) procedural specificity to tailor the asset specificity construct to the context of the service industries. The characteristic of each dimension are described below.

1. **Human asset specificity** refers to the degree to which skills, knowledge and experience of a firm's personnel are specific to the requirements of dealing with other firms (Zaheer and Venkatraman, 1995). It encompasses any unique knowledge or skill that suppliers develop through training, and represents specialized know-how or experience specific to a particular employer/employee relationship, i.e. the knowledge or skill is not transferable as it has limited relevance to other job situations (Lamminmaki, 2005). Dibern et al. (2005) consider human asset as knowledge specific assets that arise from learning-by-doing (Williamson 1996), and which are not easily transferable, owing to their limited application in other work settings (Lamminmaki 2005). De Vita et al. (2011) also add that human asset specificity involves not only the expertise that is required for carrying out a particular activity, but also the costs of training and the development of a corporate culture that facilitates the interaction within the transactional relationship, (Ruchala, 1997). It includes supplier's access to the buyer's confidential information (Anderson 1985; Anderson and Schmittlein 1984; Klein et al. 1990; Weiss and Anderson 1992) and the annual hours spent by the supplier's personnel interacting with the buyer (Dibern et al. 2005).
2. **Site asset specificity** refers to the transaction relationship when the buyer and the supplier are in close proximity to a buyer or seller in term of site, location and facility production. This aims to reduce inventory and other related processing costs (De Vita et al., 2011). De Vita et al. (2011) remark that once in place, the site asset specificity involved are highly immobile and, thus, the cost of their relocation is very high (Joskow, 1988; Lamminmaki, 2005; Morill and Morill 2003; Williamson, 1983).
3. **Physical asset specificity** refers to investments in physical assets that are tailored to a specific transaction and have few alternative uses, owing to their specific (design) characteristics (Joskow 1987, 1988; Morill and Morill 2003). Comparing with human asset specificity, it is more tangible to measure and assess the uniqueness of equipment and tools required by the supplier for the purpose of the transactional relationship (Klein and Roth 1990; Stump and Heide 1996; Walker and Poppo 1991). This

asset concerns investments in physical assets relating to a particular transactional relationship. For example, Milgrom and Roberts (1992) refer to a wing producing facility investment made by a Boeing supplier. These wings are customized to a particular Boeing plane and cannot be redeployed by others. Therefore the investment limits use value in other wing transactional relationships.

4. **Dedicated asset specificity** refers to assets that are of general purpose as opposed to specialized uses (physical asset specificity), but which have been made for a particular transactional agreement that is likely to entail a long-term relationship (De Vita *et al.*, 2011). Lamminmaki (2005) provides the example from hotel industry as a hotel might expand its facilities on the assumption that delegates from a neighboring conference venue will use its facilities. This can be seen as closely associated to reputation investment (Lohtia *et al.*, 1994). Contractual problems can arise when one party has control over activities that can damage the brand reputation of a second party.
5. **Brand asset specificity** refers to organizational reputation. For instance, a supplier could find itself in a position enabling it to directly or indirectly cause damage to the client's reputation (Gatignon and Anderson 1988; Lamminmaki 2005; Lohtia *et al.* 1994). A buyer- supplier relationship involving activities which have a direct and great impact on the overall business performance and brand reputation could be considered as high brand asset specificity.
6. **Temporal asset specificity** refers to the matching of timing and co-ordination required by a transactional relationship of buyer and supplier. This concerns investment where timing and coordination of activities is critical, i.e. timing and coordination represent the high temporal asset (Lamminmaki, 2005). The unsuccessful co- coordinating leads to the failure of business outcome. As Malone *et al.* (1987, p. 486) define: 'an asset is time specific if its value is highly dependent on it reaching the user within a specified, relatively limited period of time'. Masten *et al.* (1991) and Lohtia *et al.* (1994) use shipbuilding as an example for explaining temporal specificity. If all activities necessary for completion of a ship have been coordinated, failure to achieve timely delivery of one item for the ship could be costly to the ship manufacturer. Although an alternative supplier of the part might exist, if this results in a delay to the ship's manufacture, temporal specificity is said to exist. In this scenario, the ship builder is exposed to the possibility of "strategic hold-ups".
7. **Procedural asset specificity** refers to organizational business process, routine and workflows (De Vita *et al.*, 2011). This dimension of asset specificity can be particularly found in service industry. The transactional relationship will be high when buyers heavily rely on suppliers who customize their work process to a particular buyer's business process. It is difficult to replace once created or to redeploy without value reduction.

These seven dimensions of asset specificity formulate distinct and interrelated, rather than substituted and isolated, dimensions of the construct. The interconnection of the asset specificity dimensions indicates that

simply investigating one dimension of the construct may be inadequate. For example, physical, procedural and site specificity involve the allocation of staff with specialist knowledge and skills or specially trained personnel to perform the activity (human asset specificity) (Lamminmaki, 2005). Site specificity may be highly correlated to temporal asset specificity to ensure smooth and zero downtime delivery of services, which enables the brand asset specificity in service industries where just-in-time delivery is an essential aspect of business operations. Similarly, temporal specificity may require the supplier and/or the buyer to assign specialized staff (human asset specificity) and customize existing operating process (procedural asset specificity) to meet the needs and requirements of the transactional relationship.

VALUE ADDED BY FM IN RELATION TO ASSET SPECIFICITY

Adapting from Williamson (1981), this research conceptualizes asset specificity from FM performances and activities that add value to the core business and surroundings as FM-related specialized abilities. The nature of transactions between FM organization as a supply side with its client as a demand side can be explained to some extent by asset specificity which describes the extent to which a given FM product or services are tailored to a specific need and requirements based on their “*specialized abilities*” for instance, nature of customer type, core business, primary activities, business needs and requirements. Organizations where FM performances and services significantly influence the operation of primary’s activities and overall business performance and outcomes, require higher engagement and collaboration from FM organizations than FM organizations that provides the day-to-day basis.

This research proposes that the degree of specificity of FM products and services in the transactional relationship can also be implied as the degree of value added undertaking by FM organization to its host organization including clients, end users and surroundings. The added value perceived by its host organization will mainly justify and outline a structure of FM ’s scope, role and function in the given organization. FM is characterized by varying degrees of asset specificity depending on the complexity and customization of FM products offering, for instance workplace solutions, service delivering, managerial skill sets, labor and workforce. The impacts of added value delivering by FM organizations can be varied from individual activity into the entire organizational portfolios. The next section introduces the seven types of asset specificity from FM-related specialized abilities that add value to the core business and surroundings from FM performances and activities:

1. **Human asset specificity** represents specialized know-how or experience specific to particular FM organizations and their clients. It proceeds from both the prior work experience and emerging knowhow from performing a current job. It has limited relevance to other task situations and organizations. Where organizations employ a total facilities management (TFM) solution, clients depends on FM managerial skills and workforces for their support services. Technological organizations such as hospital, hotel, and laboratory, they demand particular FM knowledge and activities that comply with their work practices and corporate cultures. Organizations that needs the skillful and trusted FM workers who conducts FM

services and activities such as cleaning and security. This type of asset specificity, clients acquire the higher level of commitments from FM organizations and long term investment on labor workforces. Organizations can develop and nurture knowledge dissemination within FM organizations and their clients by increasing the communication channels between both parties for instance, engaging FM organization during strategic decision process and balancing information asymmetry among demand and supply side.

2. **Site asset specificity** refers to the added value by reducing the commuting distance between demand side and supply side. A demand side includes clients, customers and end users. A supply side encompasses FM organization both in-house and service providers and also sources of facilities such as physical and virtual workplace, facility service. The proximity between both sides creates cost advantage such as reduction of the redundant information processes, transaction cost and real estate cost. For example, the concept of FM shared service that consolidates the redundancy of FM services and work places across the multiple organizations and locations into one central location.
3. **Physical asset specificity** can be seen in organizations that highly customize infrastructure, workspace and FM services. FM organizations play a critical role to its client's core business because this bespoke facility services and infrastructure influence the critical impacts to the organizational performance and business outcome such as increasing customer satisfaction, employee productivity and organization's revenue. For example, shopping areas in the airport and the retail outlets that attempt to arouse the unarticulated shopper's needs by using disoriented space layout that navigates shoppers into the bottom neck area. This aims to nurture unnerved shopping experiences by relaxing shopping environment such as shoppers could not notify day or night from covered windows. FM organizations highly involve in strategic planning decision with their senior management such as decision making process, service specification.
4. **Dedicated asset specificity** is contrary to physical asset specificity that FM organizations offer the standardized FM services and provision. Organizations can benefit from dedicated asset specificity by using economies of scope and scale. Economies of scale are offered by large investments in capacity (e.g. business park developments) which, although they are not bespoke, present problems in finding another buyer who wants to use the spare capacity, (Finch, 1996). Economies of scope are offered by FM operations and managements that encompass an entire FM supply chain for instance the concept of TFM.
5. **Brand asset specificity** refers to FM practices that support the corporate culture, enhance the corporate reputation and help organizations to attract and retain the potential talent employees. This brand asset specificity is correspondent with a current organizational strategy that increases the organizational capacity and capability. For example, one of the marketing strategies that technological firm such as Google and Facebook exploit to brand themselves as an innovative organization is their

playful workplace and related facility designs. Or organizations that advert themselves as the environmentally conscious companies by following green building practices and certified such as LEED and BREEAM. The implementation of this asset specificity tends to be a one-off decision making from clients which impacts in the short run. In order to sustain the impacts, FM organizations needs to constantly collaborate and communicate with other business units such as HR and marketing.

6. **Temporal asset specificity** refers to added value created from time- sensitive FM applicability. It can be practiced in FM services and provision by just in time inventory practice that helps corporation avoiding and minimizing the cost of inventory holding. Another example is that organizations can gain the time zone advantage, beside of cost advantage by outsourcing FM tasks to service providers from different time zones that can benefit from round-the-clock business operations. This asset specificity also can be seen in flexible buildings and workplace services that can be easily adapted for a change of time.
7. **Procedural asset specificity** can be practiced in the organization where FM processes and practices integrate with their client's work process. FM working process also needs to comply with client's corporate culture and work practices. Clients and end users demand the minimized rate of FM operation downtime because FM services and activities ensure the success of business operations and outcomes. For example, the hygiene in hospital and/ or laboratory is the critical factor to success operation outcome more than the other business sectors such as cleanliness in the general offices. FM organizations closely engage in client's decision making processes in order to synchronize both demand-supply working processes.

There is a risk of opportunistic behavior occurring from FM service providers with their clients who heavily rely on FM-related specialized abilities. In other words it is vulnerable to opportunistic behavior by the other if the issue of asset specificity is not considered, (Finch, 1996). For example, the hold-up problem will arise when organizations employ the incumbent operators of the facility who undergo a considerable learning curve during the duration of a project (Finch, 1996). If clients do not have or prepare for the appropriate exit strategy, the switching cost would be overly high to renew the contracts with the existing service providers who hold and control the asset specificity upon clients. An understanding of the extent and nature of asset specificity is critical to the formulation of an appropriate contracting format in FM, (Finch, 1996). Finch observes that the greater degree of specificity, the more important it is to establish ex-ante and ex-post protection against opportunistic behavior by one of the parties. It aims to prevent hold up situation with the incumbent vendors and overly high switching cost when clients want to renew the contract with the existing service providers who possess and control the high FM asset specificity to the organization.

One of the asset specificity theory's implications in general management research is to explain the rationales and actions behind the strategic decision making on **whether**, **what**, and **why or why not** to outsource organizational support functions such as finance consultancy, HR services and ICT solutions. But there is a lack of discussion and research using this theory in FM. In order to compliment the body of existing FM

knowledge, this research thus intends to match its applicability with findings from empirical studies to explain the logic behind these strategic dilemmas.

FOUR FM VALUE ADDED POSITIONS

Chotipanich (2004) pinpoints two main basic factors that impact on the choices of facilities needs in the organizational decision making process: first, *internal factors*, such as, organizational characteristics, facilities features and business sector and second, *external factors*, such as, economic, social, environment, legislation and regulation, FM market context, and local culture and context. These factors define characteristics of decision making behavior and primary stakeholders who are involved in decision making process. Asset specificity theory adds another internal determinant factor that justifies the FM 's scope, role and function in the given organization: *FM-related specialized abilities*. It is considered as the above the line contribution and offering from FM organizations. It can be connoted as the value added from FM provision and services to the organization's core business.

This research formulates the **four value added positions** and their associated characteristics of FM-related specialized abilities that add and/ or create value to the core business and surroundings. Each type of FM-related specialized abilities has a particular characteristic of collaborative relationships between FM organizations and their stakeholders. In order to deliver the right specialized abilities to the demand side, this research argues that each type of collaborative relationship requires different groups of primary stakeholder:

1. Support

The main function of this value added position is to support the organizational primary activities on a regular on-going basis without disturbing at the lowest cost. It can be implemented by achieving economies of scope and/ or scale. Cutting edge or forefront service provisions are not required because the role of FM is perceived as a non-core business function that cannot impact the outputs and outcomes of the core business. This is the cornerstone of FM products that provides the basic FM support that is required by all types of core business needs. FM plays a supportive role in the organization. As a result this category of FM product is usually contracted out to any external service providers who can meet the needs with the lowest cost. Any services or products that deliver the required performances to meet the minimum service level agreement (SLA) are perceived as similar. The client assigns this FM product specification and responsibilities to FM providers rather than co-creating between both parties. The downtime of the FM product does not critically impact the client's core business and operation because the FM process is not involved in the business processes and is almost irrelevant to the organization's primary activities. This type of FM role can be performed within the organizations as a back office function. This category of FM products has become a commodity and is recognized by all types of stakeholders. As a result, FM providers have to compete with the lowest cost to attract the clients and extend the contracts. It provides only short term impact-on the core business. The relationship between FM organizations and their clients is likely to be 'hit

and run' behavior rather than a long-term relationship. There are no risk and benefit sharing in this relationship. The informative data are transferred from a client to FM providers in a top-down manner. The FM organization and other business units seem not to collaborate in terms of knowledge sharing. FM-related specialized abilities are to **support the operation of the organizational primary activities** running effectively and efficiently with the cost advantage. This type of FM-related specialized ability is relevant to **dedicated asset specificity** that corporations could benefit from achieving economies of scope and/ or scale. FM organizations need to collaborate with a **senior management** of the given organization. It is the conventional spot- market relationship with the cost-sensitive contractual agreement. The involvement of the FM organization is only at the operational level. FM services and provisions are required as a commodity, which has no significant difference among different FM providers.

2. Enable

For this category of the value added positions, the FM organization's role embraces the purposeful initiatives of not only supporting the activities of core business, but also enabling corporate capability and capacity. FM organizations and their clients establish one-off decisions and implementations responding to current organizational demands in close collaboration with one or more business unit directors such as marketing, HR, production, R&D and finance in order to customize the FM product specification. The occasional downtime would not create negative impacts to the core business. These organizations want to create the organizational capacity and capability. FM providers and clients mutually share economic risks and benefits, however, cost reduction still plays a key role in the decision making process. This category of FM products offers cutting-edge practices, performance framework, processes to enable organizational productivity, business profitability, operational efficiency and effectiveness and also end user satisfaction. With a short-medium time frame the expected outputs will need to respond to current corporate initiatives. It is required when an organization needs FM products for the specific purpose of enabling its competitiveness or elevating itself to a position of industry leadership. The FM organization enables the current corporate strategy such as adding to the corporate brand value. FM engages in the operational and tactical levels in order to align FM processes with organizational primary processes. FM product specifications will be justified by clients together with one or more business units such as marketing and HR. FM-related specialized abilities are to **enable the organizational capacity and capability** with the specific organization's demands. This type of FM-related specialized abilities encapsulates three asset specificities: **brand, site and temporal asset specificity**. FM organizations need to collaborate with **one or more of business unit directors and senior management** of the given organization.

3. Ensure

With this value-added position the FM products focus on operational reliability by ensuring that the FM products continue to operate normally and without interruption. It can be seen in some specific core businesses for example, in laboratory, hospital and technological business setting. For this category of FM products any downtime will impact significantly on the operation of primary activities. FM organizations will

generate a greater impact on the organizational core business when compared to the enable and support position. The primary activities will immediately experience the negative impacts to the core business such as loss of client royalty, loss of revenue and branding; with immediate impacts on the core business productivity and profitability. Hence, the FM organization plays a critical role to the host organization. It is necessary for the FM organization to perform as the best in class. FM activities and performances are embedded in organizational business process and FM organizations are highly involved in strategic decision process. Moreover, the FM organization needs to collaborate with the larger group of business units. The novelty of the FM products does not require as the enabling role because the main requirement of this role is to ensure the operation of organizational primary activities. FM-related specialized abilities are to **ensure the operation and performance continuity of primary activities** continuing to operate normally and without interruption. FM organizations offer FM service and provisions focusing on operational reliability and minimizing the operation downtime. Corporations rely on FM knowledge, workforce, skill and expertise that comply with organizational business processes. This type of FM-related specialized abilities covers two asset specificities: **procedural and human asset specific**. FM organizations highly collaborate and engage with a board of other business unit director particularly production in order to deliver the right FM services with their needs and expectations. FM organizations need to collaborate with **a board of business unit directors** of the given organization. The FM organizations and their host organizations share mutual risk, benefit, trust and commitment relationship. FM organizations and their client's relations move from spot market-driven relationship towards becoming the preferred partners. FM working processes are incorporated/ embedded into organizations' primary activities and the client's core business. The degree of knowledge sharing between FM organizations and their clients is high. Facilities managers play a key role from tactical to strategic levels.

4. Enhance

For this category the FM organization becomes an indispensable part of its client's organizations at the strategic level. The aim of the FM product is to satisfy the client's customers, who directly impacts organizational outcomes; for example, revenue in the private sector or end user's well-being in the public sector. As the FM products immediately impact the end user's perceptions and satisfactions, their specifications are highly customized by the end user's requirements in order to enhance the end user's satisfaction and increase organizational productivities. Clients and the core business require the most reliable and innovative FM products, practice and framework to enhance the end user satisfaction. Any downtimes will immediately impact the organizational operation and outcomes. This value added position is relevant in the health care and retail industry, concert halls and airports. An FM organization co-creates the FM products specification with all relevant stakeholders involving from client, business units, and end users. End users might not actively participate during the decision making process but FM and client and business units have to consider end users as the primary stakeholder. FM-related specialized abilities are to **enhance to operational performance and business outcome** of the core business. Unlike the previous support position, under the ensure position, the FM organization must closely collaborate with its client. This type of

FM-related specialized ability is relevant to **physical asset specificity** that highly customizes infrastructure, workspace and FM services to FM's stakeholders. FM organizations collaborate with **end users** of the given organization. The roles and responsibilities of FM shift away from supportive roles to becoming an organizational core function. The scope of FM activities is not only meeting the client's needs but also meeting the end user's needs. The FM organization and its host organization share mutual risk, trust, benefit and commitment including the organizational bottom line. The facilities manager can engage in the client's organization's decision making process. At a strategic level, FM and client jointly create shared innovation and value.

Table 1 below summarizes seven FM-related asset specificities that create four types of value adding position and primary stakeholders involved.

Table1: the relation of asset specificity and value added position

FM-related asset specificity	Value added position	Primary stakeholder
Dedicated asset specificity	To support the operation of the organizational primary activities	Senior management
Brand asset specificity	To enable the organizational capacity and capability	One or more of business unit directors and senior management
Site asset specificity		
Temporal asset specificity		
Procedural asset specificity	To ensure the operation and performance continuity of primary activities	Board of business unit directors
Human asset specificity		
Physical asset specificity	To enhance to operational performance and business outcome	End users

FM-related specialized abilities involved with procedural, human and physical asset specificities should be kept in-house unless corporations need to find the most optimal way to fulfill the needs from the demand side with FM-related specialized abilities from external suppliers. Considered as non-core business and non-core competency, seemingly, corporations tend to outsource and out-task FM provision and services to the external service providers who hold particular skill and expertise. Arguing that each type of value added requires different managerial approaches. FM activities that provide the dedicated asset specificity with the cost advantage may not need to engage in strategic decision as much as physical asset specificity that enhances organizational performances and outcomes. Given types of FM-related asset specificities associate with the particular collaborative relationships with FM's primary stakeholders, for example when the corporate decision on provision arrangement by using total FM (dedicate asset specificity), partially in

house or outsource in order to benefit from cost advantage is mainly made by senior management. Other stakeholder groups including FM organizations tend to be excluded from decision making process.

The structure of the following section is divided into two main parts: The first part develops the two building blocks of FM product-process matrix. A framework is then built to guide managers in the decision regarding the best possible way to undertake FM provision and services. The development of a product- process matrix requires the conceptualization of its two building blocks: (a) The value added product structure - a classification scheme of product categories and (b) the value added process structure- a classification scheme of the value added process stage. Such a typology allows the FM organization to analyze its current value delivering position and projects the proposed added-value delivering position. This research proposes that the degree of value delivery by FM organizations is based on the FM product offering matching the type of FM processes between FM organizations with their clients. FM organizations and their activities are presented systematically to allow for comparisons not only of the positioning of facilities services but also of the restructuring of services within, and reallocation between different types of facilities services.

FM PRODUCT

FM product is conceptualized as individual and/ or bundles and/ or portfolio of FM related contribution that support and accommodate the primary activity of the organization and its properties. It can be FM provisions (software) and materials (hardware) for instance services, physical assets, performance, managerial knowledge, technical knowhow, tools, and consumables. The scope of FM product encapsulates not only building operation and maintenance but it also includes workplace, facilities, support services, property, corporate real estate and infrastructure. The concept of FM products have been discussed and classified by FM researchers as shown in table 2:

Varcoe (1993) groups a FM product into three categories based on its capacity and capability of suppliers who offer/ provide related FM products. First, the comprehensive one-stop solutions, offering both the management and all of operational FM products from total FM supplier. Second, the management expertise and FM related know-how from FM companies who supply FM related products. And third, the specialist FM product from service suppliers who offer particular operational services.

Nutt (2004) categorizes FM products into four generic types of primary resource management central to the FM function: The management of financial resources, physical resources, human resources and the resources of information and knowledge. Nutt (2004) also identifies FM product from its impacts related to time frame duration: The “short-short” time focus of the support services sector, the “short-medium” time horizons of business, the “medium-long” time frames of the property market and the “long-long” time scales of environmental concerns.

Chotipanich (2004) classifies a generic scope of an FM product by its functionality encapsulating eight clusters: (1) Real estate and property development, (2) facilities project management, (3) maintenance and

repairs, (4) building services and operations, (5) office services, planning programming, (6) space planning, (7) operations administration/ management and (8) employee supports and services.

Table 2 shows FM products from different classification criterion

Author	Classification criterion	FM product
Varcoe (1993)	Capacity and capability of FM provider	Management expertise
		Operational services
		Management expertise and Operational services
Nutt (2000)	Time frame duration	"Short-short" time focus of the support services sector
		"Short-medium" time horizons of business
		"Medium-long" time frames of the property market
		"Long-long" time scales of environmental concern
Chotipanich (2004)	Functionality	Real estate and property development
		Facilities project management
		Maintenance and repairs
		Building services and operations
		Office services, planning programming
		Space planning
		Operations administration/ management
Kaya and Alexander (2005)	Output perceived	Employee supports and services
		Benefits to core business recognized by FM main board director
		Viewed as property issue by property manager/ director
		Viewed as people issue by HR director
		Viewed as operational issue by operational director
		Viewed as hard cost issue by financial director

Kaya and Alexander (2005) distinguish FM products from the output perceived by five different customers' views from its host organization: (1) Benefits to core business recognized by FM main board director, (2) viewed as property issue by property manager/ director, (3) viewed as people issue by HR director (4) viewed as operational issue by operational director and (5) viewed as hard cost issue by financial director.

Based on the above views the FM product structure differentiates product offering on a continuum of FM products. The key factors in an FM product can be categorized into two groups:

- (1) Input of FM products including capacity and capability of suppliers, primary resource, and application
- (2) Output of FM products including outcome from FM product, impact from time frame perspective

This research differentiates between FM product stages according to the degree of the customization and complexity based on FM literature, (Chotipanich, 2004, CEN, 2010) and adapted from the literature on service research (Tinnilä and Vepsäläinen, 1995, Schmenner, 2004). The high degree of FM product customization and complexity will create the high degree of inter-dependence between FM organization and its primary stakeholders. Each of them has specific characteristics as follows:

1. **No-frills** is the commoditized FM product with standardization of offering and few options in terms of product delivery. It is a staple contribution for supporting organizational primary activities. It carries out the day-to-day basis operation creating the short-term impact to its host organization. The operation downtime does not directly influence the productivity and effectiveness of organizational primary activities. End users explicitly perceive and comment on the quality and effectiveness of this FM product more than other types of FM products. Examples include cleaning and housekeeping, catering, reception and maintenance and repair of mechanical plants.
2. **Ad-hoc** delivers the extended numbers of FM product options with more complex specifications than no-frills. The main objective of ad hoc is to respond to the current organization strategy and to initiate the organization capability and capacity. It focuses on short-medium impacts to its host organization. The output of this product is primarily reviewed by customers who supervise service level agreement (SLA) or key performance indicator (KPI). A current example is the implementation of the environmental certificate that attempts to decrease the social pressure on an environmental impact of FM products and to increase the brand awareness of the corporation in terms of public good.
3. **Nail-down** offers the more customized FM products that highly engage with the operation of host organization's primary activities. It contributes the medium-long impact to its host organization. FM aims to ensure the efficient and effective operation of primary activity by providing lowest FM operation downtime. The downtime of an FM operation influences a primary activity and business outcome. Because of its more tailor-made product and longer-range effect, it requires an FM provider to be involved in strategic planning and decision making processes with its clients and business unit directors. Examples include hygiene practices in hospital and laboratory, leasing and sub-letting review, facilities planning/master planning, real estate and property portfolio strategy, acquisition and disposal of sites and buildings, and leasing negotiation and management.

4. **Bespoke** is closely associated with or even embedded in the organization's primary activities. It contributes to the long-term impact and affects the organization's bottom line perceived by clients and top management teams directly. Facilities managers are closely engaged in an organization's strategic planning process. FM organization and its host organization share the mutually agreed goal, for instance benefit and risk sharing. Examples include retail outlets and space renting, community affairs and public relation, long term resource planning and strategic development planning.

Figure 1: Four continuums of FM products

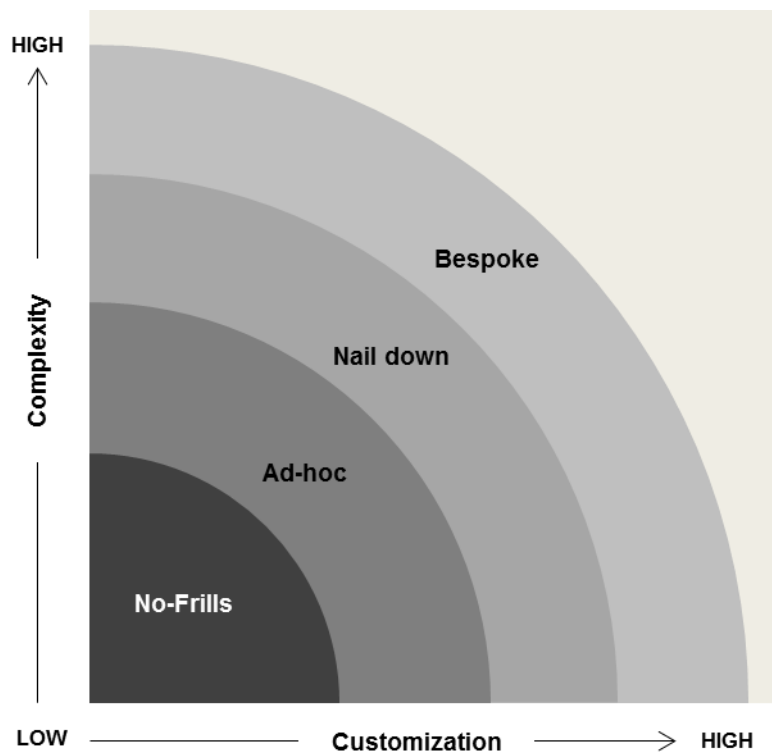


Table 3 shows the FM product structure and relates the four stages continuum of the FM product structure from lowest to highest degree of customization and complexity of contingent involved. There are four key characteristic attributes of FM value added product as following

1. *Key objective*: How is the FM product defined/ perceived from client, customer and end users? How comprehensive is the range of existing FM products?
2. *Strategic intent*: What is the purpose of the FM products in the organization? What does core business tend to achieve through FM activities?
3. *Performance metric*: How will the FM products be evaluated? What success criteria of FM performance would be justified?

4. *Core-periphery*: The relevance between FM product and an organization's primary activity. The closeness is high when the FM product is closely related to the firm's core business activity and low when it is unrelated to the core business.

Table 3: Characteristic attributes of the FM product

Characteristic attributes	FM product			
	No –frills	Ad-hoc	Nail-down	Bespoke
Key objective	Support the primary activities with the lowest cost	Correspond with the current organization strategy	Engage with organizational primary activities	Embed in organizational primary activities
Strategic intent	Meet the basic needs	Fulfill the specific needs	Exceed the basic needs/ Best in class	Discover the un-articulated needs
Performance metric	Cost	SLA, KPI	Performance downtime	Organizational bottom lines and outcomes
Core- Periphery	Almost irrelevant from organization primary activity	Compatible with a current organization strategy	Involve in organization primary activities	Be embedded in organization primary activities

For an individual organization it may employ different types of FM products. Although there are several types of collective FM products in one organization, it is argued that there is only one FM product position perceived by the stakeholders. This is based on the nature of the core business, corporate culture, the primary activity's operation and organizational strategy. FM organizations need to develop and match the appropriate way to deliver chosen FM products to their stakeholders. The following section will elaborate four types of appropriate ways (i.e. the FM process) to deliver FM products.

FM PROCESS

The FM process is an act of effort from the FM organization to deliver its FM products to its stakeholders. This is the collaborative relationship between FM organizations with its demand side which focuses on how FM organizations offer FM products to its clients? And how do clients perceive FM product offering? The success of a collaborative relationship leads to the success of value delivering to the stakeholders (Lehtonen, 2006). The characteristics of a successful collaborative relationship consist of trust, the length of commitment and the willingness to coordinate activities (Mohr and Spekman, 1991). The discussions of the conceptualization of FM processes have been discussed and classified by many FM authors as shown in Table 4.

Table 4: FM process and classification criterion

Author	Classification criterion	FM process
Burstow (1994)	Role of FM organization	FM as a contractor who provides the commoditized service FM as a business partner who provides the added value service
Barret (2000)	Levels of innovation through the supply chain	Information transfer Knowledge exchange Knowledge collaboration Innovation chain Innovation network
Lehtonen (2006)	Length of relationship between FM organization and its client	Short-term focusing on operational level Medium-term focusing on uncertain reduction and quality improvements Long-term focusing on mutually agreed goal and activity

This section proposes a FM process typology that incorporated the role and influences of stakeholders. It provides the basic information for strategic decision making on how stakeholders influence FM strategy and each strategic style that stakeholders use to influence FM strategic decision. Better understandings of stakeholders' behavior will incubate the added value delivering to FM stakeholders. The proposed typology introduces a counter intuitive approach to the existing FM literature, arguing that to add value to its stakeholders; FM organization ought to assess their stakeholder's behaviors and how stakeholders influence FM organizations on their delivering services. As stated in the introduction, understanding how stakeholders influence FM strategy is indeed a crucial responsibility for facilities managers in the strategic planning process. This insight allows FM practitioners to understand the stakeholder's behavior as a starting point to determine the right strategic decision.

Burstow (1994) categorizes FM processes into two types based on the type of FM role: FM as a contractor, which provides the commoditized services, justified by activity rather than performance and FM as a business partner which provides the added value services and offers a wide range of service.

Barret (2000) classifies the hierarchy of the FM process into five vertical levels based on levels of innovation through the supply chain. Starting from non-core FM functions (level 1) to a strategic level (level 5), he suggests that at level 5 there is a high probability of creating value. The innovation network at level 5 represents the strategically collaborative efforts with FM suppliers; a concerted and sustained effort needs to be performed in order to build strong and creative relationships.

Lehtonen (2006) categorized FM processes into three categories between an FM organization and its client based on the duration of relationship. First, arm's length contract is the short-term relationship focusing on operational level. The contractual agreement is focused on price. There are no mutual goals and activities

between the FM organization and its client. Second, operational partnering is the medium-term relationship focusing on uncertain reduction and quality improvements while the level of strategic involvement is not so significant. Third, strategic partnering is the long-term inter-organizational relationship, usually spanning a period of three to five years, exceeding the duration for operational partnering. There are mutually agreed goals and activities between the FM organization and its client.

The right communication is the key success factor to deliver the right value to the group of stakeholders. FM organizations fully deliver stakeholder value when they can communicate to stakeholders what and how they offer. Stakeholders, who perceive the facilities products, will fully acknowledge the offered value when they understand FM working process and even jointly co-create FM working processes. Facilities process initiates from the communication channel which refers to spaces or arenas where data, information, knowledge and innovation can be transferred between both parties; FM organization and stakeholders. The communication channels impact the organizational decision making. Typically, facilities managers act on the behalf of FM organizations and clients act on the behalf of stakeholders who perceive and impact from facilities products. Moreover, the flow of communication is typically one-way communication from client to facilities manager. This facilities process suggests that if channels are broadened, the delivering of value will be increased. Value delivering from FM process is increasing from arm's length to strategic alliance depending on degrees of "mutual involvement" and "data transferring" between FM organization and its client.

During strategic planning process, it is necessary to understand how stakeholders try to influence FM organization. Poor stakeholder management can cause time delays and cost overruns (Yang et al. 2009). Different stakeholders have different levels and types of investment and interests, so facilities managers should communicate with all the parties to satisfy their needs. Many researchers in stakeholder management address the needs of managing stakeholders as shown in table 5.

Table 5: The importance of managing stakeholders (Yang et al. 2009)

Researcher	The importance of managing stakeholders
Mellahi and Wood (2003)	It is an important method for increasing the likelihood of achieving the marketplace success
Clarkson (1995)	The corporation's survival and continuing success depend upon the ability of its managers to create sufficient wealth, value, or satisfaction for stakeholders
Alexander and Buchholz (1982)	High levels of responsibility towards primary stakeholders can lead to lower explicit costs
Caulkin and Black (1994); Kotter and Heskett (1992)	The performance of companies that balanced the interests of all their stakeholders is better than that of those which put their shareholders first
Donaldson and Preston (1995)	Adherence to stakeholder principles and practices tended to achieve conventional corporate performance objectives better than rival approaches
Preble (2005)	The mismanagement of stakeholder activist issues can result in lost markets and revenues, a decline in share prices, large legal fees, as well as wasted management time

FM researchers (Lehtonen 2006, Barrett 2000, Burstow 1994, Katchamart 2011) address the importance of collaborative relationship. They suggest that the success of a collaborative relationship leads to the success of value delivering to the stakeholders. In order to cultivate the successfully collaborative relationship with its stakeholders, FM needs to understand stakeholder's behavior and how they would influence FM strategic decision. However, there is scarcity of understanding stakeholder's behavior in FM academic literature.

Frooman's (1999) grounds his typology in resource dependence theory (RDT). Resource dependence is built on the notion that organizations are not completely self-sufficient, but are reliant upon other organizations in their environment to provide the resources they need for survival. Frooman's provide heuristics with which researchers can develop understanding of complex organizational phenomena. This external control of organizations is at the core of the resource dependence perspective. As Pfeffer and Salancik (1978) state, "for continuing to provide what the organization needs, the external groups or organizations may demand certain actions from the organization in return". Frooman (1999) identifies different types of resource relationships in terms of dependencies. Power in resource relationships may be asymmetrical, where one actor is more powerful than others due to that actor's control of critical resources. Alternatively, a symmetrical power relationship occurs when there is an equal level of dependency between actors. It is important to note here that Frooman (1999) deviates from more traditional views on power, viewing it as an attribute of firm-stakeholder resource relationships, not of the actors themselves.

Dependence within firm and stakeholder relationships is related to the control of resources, whether these resources are financial, physical, or informational. In this research context, the resources are implied as the **FM-related asset specificity** where FM's primary stakeholders are dependent on the FM specialized abilities offering from the FM organizations. Frooman (1999) explains in his seminal work that in developing strategies concerning stakeholders, it seems that managers need to answer three general questions about stakeholders:

1. **Who are they?** : This question concerns about the primary stakeholders who demand and request for FM products from FM organization.
2. **What do they want?** : It is the question of what FM products are offered to their primary stakeholders by FM organizations. This question concerns their expectations between demand and supply sides FM. The overall perceived FM related contributions from stakeholders is the FM product.
3. **How are they going to try to get it?** : This question concerns their means on how stakeholders perceive and interact with FM product offering. It is the question of collaborative relationships on how FM organizations offer FM products to their stakeholders.

Frooman (1999) defines four types of resource relationships: stakeholder power, firm power, low interdependence, and high interdependence. In reality, levels of power and dependence range within these

variables. However, like all typologies, Frooman's work demonstrates "ideal types" that are helpful for understanding the nature of the focal resource relationships.

Frooman's (1999) typology illustrates the connection between resource relationships and stakeholder strategy selection. As stakeholder power is determined by the nature of dependency (Molm et al., 1999), the direction and extent of dependency determines the power advantage within a particular firm–stakeholder relationship (Frooman, 1999). Frooman's influence strategies are underlined by two defining aspects of stakeholder relationships: (1) **resource control**; and, (2) **influence pathways**. Each set of influence strategies and their respective characteristics are depicted in Table 6, and explained below.

Table 6: Resource control strategies and influence pathways

Resource control strategies	Characteristics of the strategy
Withholding	Stakeholder discontinues or threatens to discontinue supply of resources to a firm
Usage	Conditions attached to the supply of resources, firm cannot afford to walk away from relationship
Influence pathways	Characteristics of the pathway
Direct	Stakeholder manipulates the flow of resources
Indirect	Stakeholder works through an ally to manipulate the flow of resources

As shown in Table 6, Frooman's (1999) resource control strategies divide into two types: **withholding** and **usage** strategies. Withholding strategies occur when a stakeholder discontinues, or threatens to discontinue, the supply of resources to a particular firm with the intention of forcing change in certain behaviors.

- The stakeholder threatening **withholding** must have the ability, or at least, be perceived to have the ability to walk away from the relationship and survive if a threat must actually turn into action. When this is not possible and a stakeholder is unable to shut off the flow of resources to a firm, Frooman suggests a second type of resource control strategy, that of usage.
- **Usage strategies** occur when dependence is more evenly shared and the stakeholder cannot afford to shut off the flow of resources. Thus, rather than completely withholding resources, the stakeholder attaches conditions to their continued supply (Frooman, 1999). Similar to withholding strategies, despite resistance, usage strategies are used to drive change in firm behaviors. Obviously, when interdependent relationships exist, actors are more prone to simply accommodate the needs of each other (Frooman, 1999).

Frooman's (1999) second set of stakeholder strategies relate to the identity of the actor supplying resources to a firm. Indeed, withholding and usage need not always be undertaken by a stakeholder, but may be performed by an ally of the stakeholder that has an established relationship with the focal firm (Frooman &

Murrell, 2005). The existence of such allies opens up pathways of direct and indirect influence through which the stakeholder can exert resource control (Frooman, 1999; Frooman & Murrell, 2005). As resource relationships are often embedded in other relationships, multiple pathways of stakeholder influence can emerge. Thus, Frooman (1999) identifies two influence strategies: **direct and indirect**.

- **Direct influence** strategies are where the stakeholder manipulates the flow of resources unilaterally. This often occurs in relationships of high dependence, when a firm must be directly responsive to the demands of the stakeholder supplying resources necessary for its survival. Meanwhile, indirect influence refers to the circumstance where, “a stakeholder works through an ally, by having the ally manipulate the flow of resources to the firm” (Frooman, 1999).
- **Indirect influence** is founded upon communication among allies, which connotes political activity and coalition building among stakeholders.

Table 7 indicates the firm–stakeholder relationships that Frooman (1999) suggests lend themselves to the employment of particular influence strategies. In relationships of low interdependence, indirect and withholding influence strategies are appropriate. In relationships where stakeholders hold power, direct and withholding strategies are used. Alternatively, stakeholders use indirect and usage strategies to influence firm behavior in relationships where the firm is more powerful than its stakeholders. Finally, in resource relationships of high interdependence, stakeholders typically employ direct and usage influence strategies.

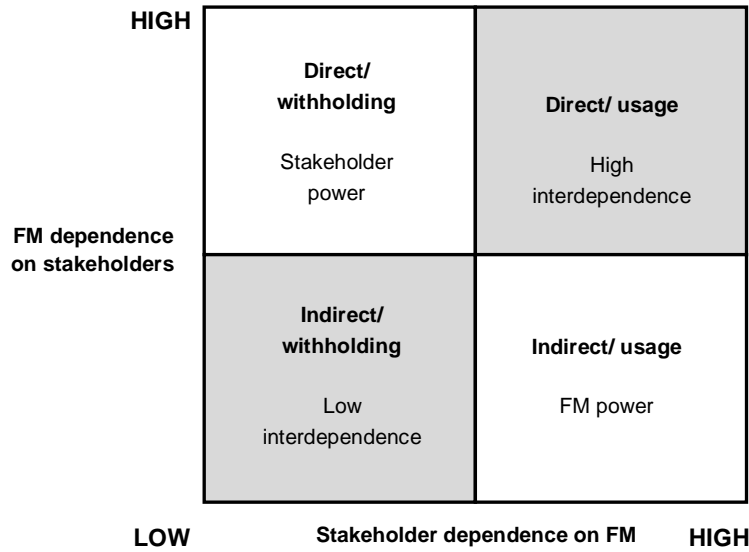
Table 7: Stakeholder relationship which influence strategy

Stakeholder relationship	Influence strategy
Low interdependence	Indirect/withholding
Stakeholder power	Direct/withholding
Firm power	Indirect/usage
High Interdependence	Direct/usage

Based on the above views the FM process structure can be related to a continuum of levels of information, knowledge and innovation sharing and mutual involvement. This research classifies four types of FM process stages according to the degree of collaborative relationship between FM organizations and their stakeholders.

This leads to the following four types of stakeholder influenced FM strategies, which are also illustrated in the matrix in figure 2.

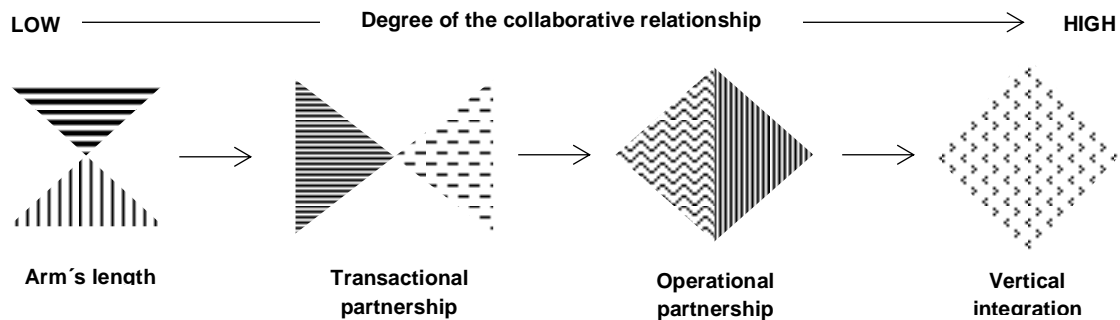
Figure 3: The dependence between FM organization and its stakeholder



The relationships between FM organizations with stakeholders are not a hub and spoke wheel, but it is a network of relationships among actors. This suggests that facilities managers should prioritize relationships among them and determine the choices of strategies based on prioritizations. When FM matches the strategic decision with the right relationships, then stakeholders will receive and perceive the added value from the right service delivering.

Figure 3 presents the FM process structure categorized according to the degree of collaborative relationship between the FM organization and its stakeholders.

Figure3: An array of the FM process structure



Each of the FM processes has specific characteristics as follows:

1. **Arm's length** is the conventional spot- market relationship of an FM organization with its client who is FM's primary stakeholder. The contractual agreement is cost-sensitive. Clients focus on cost reduction and FM providers aim to meet the service level agreement (SLA) and key performance indicators (KPIs). There is no risk and benefit sharing equally in this partnership. The input/ output transfer from a client to

the FM providers as a top-down manner. The involvement of the FM organization is only at the operational level. FM products are required as a commodity, which has no significant difference among different FM providers. Because of the commoditization of FM products, there are many FM providers per client. The relationship between FM organizations and their client is one of low interdependence and the clients will choose the indirect/ withholding strategy to influence FM.

2. **Transactional partnership** is the equivalent of an information transferring relationship between FM organizations and one or more of organizational business unit directors who are FM's primary stakeholder. FM organizations and their primary stakeholder mutually share economic risk and benefit, however, cost reduction still plays a key role in the decision making process. For example, when organizations employ a Total FM (TFM) that enables the cost advantage from economies of scale and scope, with the benefits of a closer collaboration between the FM organization and client compared to the arm's length relationship. The FM organizations engage at the operational and tactical levels in order to align FM working processes with the client organization's primary activities. The relationship between FM organizations and their primary stakeholder is marked by stakeholder and the stakeholder will choose a direct withholding strategy to influence FM.
3. **Operational partnership** is the shared mutual risk, benefit, trust and commitment relationship between the FM organizations and their board of organizational business units who are FM's primary stakeholders. FM organizations and their primary stakeholders' relations move from spot market-driven relationship towards becoming the preferred partners. FM products are incorporated/ embedded into the organizations' primary activities and the client's core business. The degree of knowledge sharing between the FM organizations and their clients is high. Facilities managers play a key role from tactical to strategic levels. The relationship between FM organizations and their primary stakeholder is marked by FM power and the stakeholder will choose an indirect/ usage strategy to influence FM.
4. **Vertical integration** is the mutually agreed relationship between the FM organization and its end users who are FM's primary stakeholder. They share mutual risk, trust, benefit and commitment including the organizational bottom line. The roles and responsibilities of FM shift away from supportive roles to becoming an organizational core function. The scope of FM activities is not only meeting the client's requirements but also meeting the end user's needs. There is only a single FM provider per client because of this close relationship. The facilities manager can engage in the client's organization's decision making process. At a strategic level, FM and the client jointly create shared innovation and value. The relationship between FM organizations and their primary stakeholder is one of high interdependence and the stakeholder will choose a direct/ usage strategy to influence FM.

Stakeholders use their resources to manipulate and control FM –related strategic decision for instance FM organization design, provision arrangement and FM product specification. It can be done directly or indirectly through potential allies. Each stakeholder's behavior identifies the collaborative relationships between FM

organizations with its stakeholders in term of their resource dependence on one another and then states which strategy stakeholders would choose to influence FM's decision making.

To navigate the characteristic of the FM process, there are ten key attributes of the FM process as follows:

1. *Types of Input/ output sharing*: What type of input/ output is shared between the FM organization and its primary stakeholder in term of data, information, knowledge and innovation? And how much "openness" of the input/ output sharing is in the dyadic relation between client and FM organization?
2. *Input/ output transferring direction*: How and which direction of input/ output would be transferred between FM organization and its primary stakeholders?
3. *Timeframe*: The expected duration of the contractual agreement between client and service provider.
4. *Contractual agreement*: How much and what type of benefit and loss sharing between the FM organization and its client?
5. *Ability to walk away*: The reliability from the demand side of FM products - to terminate the contract.
6. *Substitution*: The degree of dependency on FM products from a supply side.
7. *Mutual Involvement*: The managerial level involvement between the FM organization and its client's organization
8. *Primary stakeholder*: Stakeholders who directly interact and perceive the outcome of the FM product and influence the choices of FM product specifications.
9. *Stakeholder relationship*: How much stakeholder and FM organization depend on each other?
10. *Influence strategy*: How stakeholder and FM organization manipulate each other?

Table 8: Characteristic attributes of the FM process

Characteristic attributes	FM process			
	Arm's length	Transactional partnership	Operational partnership	Vertical integration
Types of knowledge sharing	Data	Information	Knowledge	Innovation
Direction of input/ output transferring	Top-down asymmetry	Single-channel symmetry	Multi-channel symmetry	Openness
Time frame	Short-Short	Short-Medium	Medium-Long	Long-Long
Contractual agreement	No risk and benefit sharing	Risk and benefit	Risk, benefit, trust, and commitment	Risk, benefit, trust, commitment and bottom lines
Ability to walk away	High	Medium-High	Low-Medium	Low
Substitution	High	Medium-High	Low-Medium	Low

Mutual involvement	Low	Low-Medium	Medium-High	High
Primary stakeholder	Senior management	One or more of business unit directors	Board of business unit directors	End users
Stakeholder relationship	Low interdependence	Stakeholder power	FM power	High Interdependence
Influence strategy	Indirect/withholding	Direct/withholding	Indirect/usage	Direct/usage

Similar with FM products there is more than one type of FM processes in one organization. Each type of FM product requires a particular way to deliver and perception from the stakeholders. FM organizations need to develop the appropriate platform and channel to communicate chosen FM products to their stakeholders. The following section will propose the typology of matching FM products and FM processes that assist the FM organization and stakeholders to optimize their relationship between the supply and demand sides.

INTRODUCING FM PRODUCT-PROCESS MATRIX

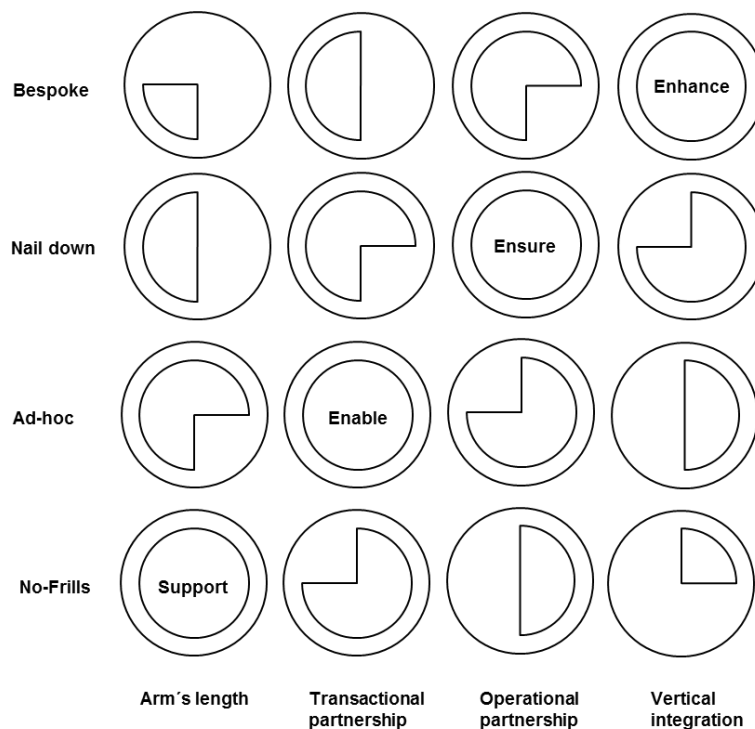
The FM product-process matrix introduced in this section comprises a two dimensional structure for identifying an appropriate match between FM products and FM processes. The main rationale of the FM product-process matrix is to find an efficient matching of product and process based on the trade-off between costs and benefit involved. FM organizations must align and allocate FM products that meet the needs and requirements of its stakeholders' discretion and decision. Each type of FM products requires a specific type of FM process. An FM organization does not need to pursue the higher managerial level than arm's length, if clients require only *no-frills* product. On the other hand, when clients require *nail-down* products, FM organizations and their clients need to adopt the operational partnership approach which is closer to core business than *no frills*. This contribution strengthens the propositions of Jensen (2011) and Lehtonen (2006) who both suggest the close collaboration/ relationship of FM and its client as the determining factor to add value to its core business.

The key premise is that once an FM organization delivers FM products that solve its stakeholders' problems and get the job done, the FM organization already fulfills the most suitable value added delivery to the client's core business and related stakeholders. This study challenges the conclusion of Kaya and Alexander (2005) who used pattern recognition for classifying FM organizations and concluded that *FM organizations are perceived from their stakeholders as a support role*. The proposed matrix shows that there are four types of FM's role as discussed above, depending on the nature of the primary activities, corporate culture and the needs of the FM products. This research revisits and expands the proposed *managerial level* of FM researchers on potential leverage of FM role from operational to strategic level. Different stakeholders from various managerial levels would justify the FM organization's role based on their interactions between their

activities and FM's performances. The efficiency and effectiveness of different repositioning strategies has not been explained by normative theories of FM in previous seminal frameworks. This contributes to a better understanding of how FM organizations should be structured and organized based on the choices of FM value added positions.

The product - process matrix is the consolidation of two building blocks, the FM product structure and the FM process structure. This matrix involves measuring FM products (what is FM offering) against FM process (how are the FM products being delivered and perceived) as shown in Figure 4. Positions on the matrix depict the interrelationship between the FM product and FM process structure in terms of FM value added position as described below.

Figure 4: A product- process matrix



There are six propositions from the proposed product-process matrix that are worth concluding in this section:

1. From the matrix the proposition is that the cell that matches FM products with FM processes along the diagonal will deliver the value added to the stakeholders greater than the cell that is located away from the diagonal.
2. The matrix can analyze the wide ranging scope of the FM product category from a single FM product, an FM product bundling to an FM product portfolio.
3. There are four possible value added positions along the diagonal that match four types of *what does FM offer to stakeholders* (FM product) with four types of *how can FM product be offered to stakeholders* (FM process)? Namely: *support, enable, ensure and enhance*.

4. Each of the value added positions identified above has its own merits and added value based on the nature of the organization, corporate culture, primary activities, specific stakeholder needs and requirements. FM organizations can best add value to their host organization core business and surroundings when FM organizations can **discover** what each stakeholder really needs from FM organizations, and **define** and **develop** the most appropriate way to **deliver** the FM product to the stakeholders.
5. The most appropriate delivery approach can be operational, tactical or strategic level. Thus it is unnecessary for FM organizations to pursue the higher or relegate to the lower managerial hierarchy if that given managerial level does not match with the FM product delivery.

CHAPTER 4: SEVEN CASE STUDIES

The applicability and managerial implication of a proposed FM product-process matrix will be presented through seven selected FM case studies. The case presentation is structured as following:

- **Case summary** provides the short introduction of the case company background, the interviewee (s), and points of interest.
- **FM 's specialized abilities** present the capacities and capabilities from FM organizations to the related stakeholders
- **Value added** presents the contributions from FM 's specialized abilities to the related stakeholders
- **FM product** presents both FM provisions (software) and materials (hardware) that are delivered from FM organizations to the demand side.
- **FM process** presents the collaborative relationship between FM organization as a supply side and its demand side on how FM product is being delivered.
- **Value added position** presents the value added position of FM organization that emerges from matching of FM product and FM process on the FM product-process matrix.

The case presentation will begin with the summary of case's interviewee(s), FM related stakeholders of each case and number of interview per case as shown in Table 1. The case selection criterion is maximum variation covering public, private and state-owned sectors that aims to depict the matrix applicability and generate the research discussion.

Table 1 shows the selected interviewee(s) and numbers of interview per case

Case	Interviewee (s)	FM related stakeholders	Number of interview (s)
LEGO	Facilities manager at the tactical level	Business unit	2
MÆRSK	Facilities manager at the tactical level	Client Service provider	3
HKSTP	Facilities manager at the tactical level	FM organization Tenant Service provider	2
ENCO	Representative of the end user group Service provider at the operational level Facilities manager at the tactical level Client at the strategic level	Client Service provider Tenant	6
DUTCH	Facilities manager at the tactical level	Client	3
THAI	Facilities manager at the tactical level Client at the strategic level	Client	3

PTTEP	Facilities manager at the tactical level	Client HR department Service provider	3
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Table 2 below provides the overview of seven case characteristic attributes.

Table 2 case overview

Characteristic attributes	Case						
	LEGO	MÆRSK	HKSTP	ENCO	THAI	DUTCH	PTTEP
Core business	Construction toys manufacturing	Logistics, Oil and gas exploration, store retail, container tower, container shipping	Facilities hub for technological corporations and start-up companies	Energy company	Facilities hub for other governmental departments	Facilities hub for other governmental departments	Operating oil exploration and production for PTT
Sector	Private	Private	State owned	State owned	Public	Public	State owned
Country	Denmark	Denmark	Hong Kong	Thailand	Thailand	Netherlands	Thailand
FM organization's strategy intent	Placed in LEGO's production processes and activities	Providing the hassle free FM services	Offering up-to-date FM procurement and services	Established as an autonomous profit center	Centralizing widespread office locations and standardizing FM service cost and quality	Standardizing FM product cost and quality	PTTEP's primary activities require trusted and skilled FM workers and reduce the high rate of turn over
Strategic choice	The right balance between cost and customization that fit the LEGO group's goals	To get the best service with the cheapest price	To offer the world class facilities service and laboratory to ensure best business result	To get the acceptable FM service with the reasonable price	To get the best service with the cheapest price	To enable the current organization strategy	To attract and retain trust and skilled FM staffs
Sourcing arrangement	In- house and catering outsourced to ISS	Global total FM contract with JCI	Outsourced to ISS as a single service provider	PTT elected ENCO as a self-governing agent for managing FM providers	Central government centrally manages FM providers	Central government centrally manages FM providers	Collaborating with an internal HR and vendors

LEGO: From business partner to preferred partner

Case summary

LEGO is a Danish construction toys manufacturing company. The FM department is part of LEGO Service Centre (LSC), the integrated business support unit consisting of five sub-units: Information Technology (IT), Human Resources (HR), Facilities Management (FM), Indirect Procurement (IP) and Travel. LSC wants to change the perception of an operational departments from being seen as only creating cost to be seen as a LEGO's valuable asset that deliver highly professional services that supports the business in a way that cannot be bought from external service providers. The main areas of FM's responsibilities are LEGO headquarters in Billund, Denmark, hosting their central administration as well as separated production sites covers Denmark, Czech Republic, Hungary, and Mexico.

FM's specialized abilities

LSC as a multidisciplinary business unit can transfer and create knowledge and expertise across LEGO Corporation. LEGO wants its FM operation and practices complying with the LEGO corporate culture which is considered as **human asset specificity**. Most of the FM products are performed by in house workforces and only a catering service is outsourced to a third party service provider (ISS). The relationship between FM and its FM supplier as ISS for catering services is close with a high degree of collaboration and LSC treats ISS as a LEGO's internal staff. LSC wants to deliver its FM products in timely manner according to its client's, customers' and end users' need with the least costs of inventory holding which can be perceived as **temporal asset specificity**. According to ownership strategy, LEGO will lease real estate for not more than 10 years. LEGO prefer to rent or lease the offices because flexibility and the uncertainty of market price, LSC might get the better deal during the period. FM ensures the flexibility to provide new services or eliminate existing services. The flexibility of FM product can be also classified as **temporal asset specificity** from FM organization to LEGO. Because of LEGO corporate culture, LEGO Company considers itself as a family owned company. LSC creates added value from breaking normal delivering process which is classified as procedural asset specificity. LSC initiates a business case called "LEGO look and feel" concept which provides services on a fixed price. LEGO client can anticipate cost from this initiative by investigating the existing normal service process which can be perceived as **procedural asset specificity**.

Value added

FM's strategic objective is to be the right choice for LSC customers and LSC employees by providing more value than external service providers comparatively. LEGO can benefit from the internal knowledge and knowhow from in house FM operation to ensure the operation of LEGO's activities and business continuity. Customer can focus on their core business's activities, by giving them the possibility to choose the right balance between cost and customization of FM products that fit their and the LEGO Group goals.

FM Product

LSC's goal is to create impacts to LEGO core business related to productivity, reliability and culture such as image and brand. LSC thus requires for a **nail down product**. This is not only for optimizing the way LSC delivers FM products but also to stress the importance of having corporate functions that really drive strategic business development. LSC needs also to have management focus on all the employees who make the wheels turn. LSC establishes lean in production and LSC administration to support continuous improvement. In order to stay competitive, FM must strive for continuous improvement. LSC aims to support the divisions in a decentralized setup in a standardized efficient way by having common customer interfaces and SLAs. By challenging itself in everything FM does, FM employees will seek new and better ways to fulfill the customer's and the LEGO Group's goals.

FM Process

The FM organization has established a "Facility Committee" as a forum to communicate with top management with focus on three aspects: project, capacity and competency. The establishment of the Facility Committee can be seen as a kind of strategic management coalition between top management and FM. For example, when LEGO wants to expand with the new production line, the Facility Committee will ask for the collaboration from head of global supply chain, chief financial officer (CFO) and corporate real estate management (CREM) to create the dialogue on the strategic level across the LEGO organization. It helps LSC to align its FM product delivery with client, business units and end users' need and requirements.

Value added position

From LSC's strategic intent, the FM organization aims to embed its FM products into LEGO's primary activity in order to ensure the operation of the LEGO primary activities and LEGO business continuity. This type of FM products then is considered as a nail down product. FM process is currently categorized as transactional partnership and aiming for operational partnership because FM organization establishes the monthly Facility Committee meeting with the goal to leverage the strategic position from business partner to preferred partner. It assists the FM organization to align FM product with three stakeholder group's needs and expectation: first senior management such as chief financial officer (CFO) to inform the status quo of the construction project, second, other LEGO business units such as production and marketing to assure the FM product qualities, third, end users, to communicate the service and operation of FM activities. It indicates the best value added position on the product-process matrix is **ensure**. The downtime of FM products can directly impact the LEGO's primary activities. LEGO also requires the specialized FM product that complies with LEGO Corporate code of conduct and culture.

MÆRSK: Preventing vendor lock-in and hold-up situation that causes high switching cost

Case summary

A.P. Moller - MÆRSK's core business is oil and gas exploration, store retail, container tower, container shipping and related businesses. MÆRSK aims to focus only on its core business and assigns the support service tasks to the professional service providers. At the strategic level, top management teams only justifies the outcome of support services, they would not involve into technical specification detail processes. The FM organization is a part of real estate department of group procurement focusing on Mærsk's non-core business support service. Group procurement is responsible for procurement support service from stationery to space lease including transportation. Its responsibilities cover from small to large projects where MÆRSK spends money on procurements. FM functions are classified as a Mærsk's non-core business that support the operation of Mærsk's primary activities and core business. The FM department provides organizational support services for example cleaning, catering, security, and travelling but excluded real estate. MÆRSK has set up the real estate and FM strategy by renting all buildings and outsourcing the capable FM providers to perform Mærsk's facility support services. Some strategic assets such as shipyards, MÆRSK owns itself because operations in shipyards are Mærsk's core business. FM as a part of group procurement does not directly involve in strategic decision process. The FM organization is not responsible for MÆRSK business operation and outcome.

FM 's specialized ability

A Mærsk's corporate principle is "stick to its core business" and the rests including FM and other support functions are irrelevant from MÆRSK's working processes. MÆRSK then requires the stripped down FM products and standardized services that support the operation of primary activities with the low rate of operation downtime. The expected output and outcome from FM service vendors are not perceived significantly different from each FM service vendor. Total FM (TFM) is employed in MÆRSK sourcing arrangement by contracting out FM products to a single FM provider (Johnson Controls Inc. (JCI)) at the global level. JCI's specialized ability is dedicated asset specificity because Mærsk's core business benefits from economies of scope and scale of a service provider who possesses the managerial capacity and operational capability. This FM-specialized ability is considered as **dedicated asset specificity**. JCI's expertise is not considered as knowledge asset specificity because JCI simply delivers the standardized FM product which does not highly influence Mærsk's primary activities and business continuity.

Value added

At Mærsk, business units are categorized as core business units which create profit and non-core business units which create cost to Mærsk's baseline. Typically, FM is perceived as a cost center. FM could not create profit across the board back to back. The only contribution from FM to Mærsk's baseline is cost saving and the other non- economic values are ignored. The cost reduction perspective conducts FM activities and decisions. FM organization provides support functions to Mærsk's core businesses and their primary

activities. FM attempts to deliver the undisrupted FM products to ensure end-users perceiving the acceptable working environment and prevent the FM product downtime. The only thing that end users need to know about FM is the expected outcome of FM offering. Added value is in a cost reduction driven manner. FM can reduce an operating cost by changing the normal working process.

FM product

MÆRSK needs the standardized and stripped down FM product which is perceived as a **no-frills product**. MÆRSK provides the agreed outcomes as an input and JCI provides FM services as an output. The FM organization establishes a monthly meeting between FM suppliers and group procurement to optimize their input and output. The FM organization utilizes the output specification as a key of quality assurance. For example as long as the floor is cleaned, the group will not involve in JCI working process or even if MÆRSK has problems with facility service, there are dedicated persons from JCI who are ready to take care of those problems. However, MÆRSK is looking for the best practices to avoid and prevent recurring mistakes, for instance transition process from changing FM suppliers may lead to mistakes. At the end, MÆRSK earns the better FM products and JCI can secure its market risks in turn.

FM process

MÆRSK aims to co-create the mutually agreed goal with JCI as a good partnership by sharing benefit and risk with JCI which is considered as transactional partnership. MÆRSK and JCI share the mutual working mindset and framework. There is no explicit agreement or penalty system on supplier's mistakes. Mostly the durations of contracts between MÆRSK and JCI are three years and can be extended based on their performances and contractual agreement. JCI delivers FM products based on its best practices and is allowed to contract out sub-contractors to do the given tasks. MÆRSK inspects for the expected outcome and cost from JCI. JCI has full responsibilities to choose sub-supplier itself, MÆRSK will not involve in sub-suppliers selection process. MÆRSK looks for the global service solutions and standards but at the local level, it may need more customized FM products. Globally, JCI is Mærsk's global partner that provides required facility services for instance catering, cleaning and security. MÆRSK has signed contracts with JCI as a global partner because it benefits the economics of scale and reduces the administrative cost. Locally, MÆRSK prefers to sign contract with the local arrangements. For example, there are 26 contractual agreements signed locally. Global will give the local partners advises and arrange workshops to achieve the excel contract with MÆRSK Corporation's standard. FM department aligns FM product's needs from Mærsk's Corporation with FM service providers by contractual agreements. SLA is used as a tool for Mærsk's contract managers to arrange and manage their suppliers. The local suppliers will be evaluated by SLA or KPI and justified by MÆRSK local offices.

Value added position

MÆRSK does not operate FM products itself but outsources them for the professional facility service providers. MÆRSK value added position is **support** because MÆRSK gain benefits from economies of

scope and scale. According to the plan, MÆRSK looks forward to be the partnership with service providers who can run the more tailor-made FM product for a MÆRSK primary activity and also understand - what, why and how are important to operation and production of Mærsk's core business.

HKSTP: Aligning internal knowledge with external knowhow

Case summary

HKSTPC (Hong Kong Science and Technology Parks Corporation) manages Hong Kong Science Park, InnoCentre and three Industrial Estates and provides purpose-built R&D office spaces, advanced laboratories and technical support services to technology companies. HKSTPC is a statutory body dedicated to foster innovation and technology advancement in Hong Kong, through the provision of state-of-the-art FM product. Since 2001, HKSTPC has also been entrusted with strengthening Hong Kong's position as a regional technology hub by promoting development of five technology clusters, specifically Electronics, Information Technology and Telecommunications, Precision Engineering, Biotechnology and Green Technology.

FM 's specialized abilities

HKSTP is a state-owned organization that mainly provides workplace and laboratory facility for technology-oriented start-up companies and multinational corporations. This project aims to provide the world class technology support and laboratory service within dynamic environment that enable start-up companies to nurture ideas, innovation development. This **brand asset specificity** can enable and brand the Hong Kong's position as a regional technology hub. In HKSTP office campus, there are approximately 8,000 end users and 400 tenants sharing the central infrastructure and FM service such as parking area, canteen, reception area, security service, gardening and outdoor space. The single office campus is dedicated as **site asset specificity** to tenants. FM processes is embedded with tenant's activities because technology-savvy tenants demand the most reliable FM services and provisions to ensure their operations and activities. The FM organization aims to engage its FM process into the operation of each tenant's primary activity which is considered as **procedural asset specificity**. In order to manage and organize the world class facility hub, the FM organization in collaboration with a service provider (ISS) initiated a facilities manager trainee program that aims to develop and cultivate the role model of FM practitioners who have the appropriate FM knowledge ranging from technical skill to managerial skill. The exchange of knowledge between internal FM knowledge and external FM provider operational expertise can be perceived as **human asset specificity**.

Value added

To provide the world-class infrastructure and services for Hong Kong to become a regional hub of innovation and technology, HKSTP provides facilities, services and a dynamic environment that enable companies to nurture ideas, innovate and develop. It includes leading-edge office, laboratories and production facilities that ensure scientists, technologists, entrepreneurs and enterprises to save development costs and time to market.

FM product

FM organization offers the best in class FM services including workplace, laboratories and production facilities to ensure the low rate of FM operation downtime and business continuity. The highest reliability of FM product is the basic requirement in such technological and scientific company like HKSTP because it may damage the operation of the tenant's core business. Thus the FM organization provides a **nail-down product** to HKSTP. HKSTP can also benefit from economies of scope and scale by contracting out FM tasks to the skilled and capable FM service provider as ISS to provide FM service and workforce.

FM process

FM organization is the mediator between an external service vendor who is capable of FM expertise and an internal demand side. This collaboration between FM organization and its demand side is thus considered as operational partnership. The strategic decision and management of FM is organized by Projects and Facilities Committee (PFC). PFC will monitor the construction and property and facilities management of Hong Kong Science Park, InnoCentre and Industrial Estates. It recommends to the Board new development, re-development and capital works projects to be undertaken by the Corporation and the modality for FM of the Corporation. It also approves or recommends to the Board the award of contracts for capital works, FM and related consultancy services. HKSTP's facilities manager is responsible for developing and managing the infrastructure of HKSTPC which aims to attract, nurture and retain enterprises and start-ups in the targeted clusters. FM organization would liaise and cooperate with all related Government agencies and bodies to ensure the standard and procedure of the development.

Value added position

According to a product-process matrix, its strategic intent indicates that the value added position of the FM organization is categorized as **ensure** because technology-savvy tenants demand the most reliable FM products to continue the production and primary activities. The FM organization attempts to be engaged in the tenant's activities in order to bridge the internal needs from end users and tenants with the external FM service provider's skill and expertise. The liaison between external FM suppliers and internal FM demands would be the main challenge of HKSTP's FM. To ensure FM product meeting tenant's needs and requirement, FM organization should increase the level of collaborative relationship with its demand side for example, tenants and end users.

ENCO: Semi-autonomous company within the big company

Case summary

PTT is a Thai state-owned energy company. Previously, subsidiary companies of PTT's host organization rented office spaces separately around Bangkok and contracted out FM services individually. In order to consolidate the redundancy of workplace and FM practices among its subsidiary companies and to reduce the FM operating and administrative costs, ENCO was established as a semi-autonomous company

responsible for managing FM service and provision for the new office campus. ENCO is perceived as a profit center by charging rental and FM service fees from PTT's 26 subsidiary companies at the market price.

Value added

ENCO offers the standardized FM product to different PTT subsidiaries. The host corporation can reduce the redundancy of FM product and decrease the operating and administrative cost from a new initiative provision arrangement.

FM specialized abilities

ENCO provides FM products only for the common areas and excluding each tenant workplace because each of them has a wide-range and diversity of tenant's FM requirements and specifications. They preferably manage their own space and FM services. One single centralized location is considered as **site asset specificity** to PTT's subsidiary companies. At an initial phase of organization establishment, there was a shortage of FM knowledge, expertise and workforces, so ENCO heavily relies on the FM professional skills, both managerial expertise and technical skills from its main service provider; CBRE. Although CBRE does not provide the highly complex and customization knowledge to ENCO, in the current situation, ENCO still needs to employ **human asset specificity** from CBRE until ENCO can create and establish its own FM knowledge and expertise. This office campus is intended to be the multi-tenants office for subsidiaries companies by sharing the common area such as reception, parking area, canteen, including common FM services for example, security, cleaning, catering. PTT can benefit from economies of scope and scale of shared service which can be classified as **dedicated asset specificity**.

FM product

For the short run, ENCO has power over CBRE because ENCO holds the legally contractual agreement upon CBRE. For the long run, however, if ENCO heavily relies on CBRE in all aspects, ENCO would confront with market lock-in situation. ENCO has to pay the high switching cost if ENCO wants to walk away from CBRE contract. CBRE can increase the power of resource control by using external factors for instance, workforce and know-how in property and facilities management. It would create lock-in problem and make ENCO harder to deal with market shifts. CBRE is the single FM provider and own the FM skill and expertise which can cause the contractual difficulty during post contractual agreement phase. It is difficult for ENCO to terminate the contract or find the new potential service providers from the competitive market. That makes ENCO dependent on CBRE for FM services, knowledge and expertise, workforce. ENCO is unable to use other potential suppliers without substantial switching cost. Particularly in Thailand where the FM market is still underdeveloped, there are not many competitive players in the FM market. ENCO needs to find the optimal way to balance FM expertise and knowledge from CBRE and developing its own professional skills. Thus CBRE provides a **nail down** product to ENCO. Moreover, according to PTT's job rotation policy, ENCO's employee at the management level would not establish the comprehensive FM professional skill, which represents another challenge for developing ENCO's own FM knowledge and expertise. With ENCO's

consent, CBRE is allowed to contract out to subcontractors. ENCO monitors the service outcomes through CBRE's supervision by using tools such as SLA and KPI. By the permission of ENCO, CBRE behaves as an ally between ENCO with its subcontractors. ENCO will not be affected significantly, if CBRE's subcontractors break off the contracts.

FM process

ENCO's contribution impacts on PTT's bottom line by reducing the cost of space rental. PTT can be perceived as ENCO's primary client at the strategic level. PTT has legitimacy over ENCO by controlling ENCO resources for instance, financial, decision authority and strategic decision. PTT directly supervises and monitors ENCO's performance both financial and operational. There is information asymmetry transferring between ENCO and PTT by top-down approach which is considered as transactional partnership. The data and information among parties is shared as necessary. ENCO mutually share risk and benefit with PTT. Since both ENCO and tenants are PTT's affiliated company, their collaborative relationship could not break apart. They equally share information and have mutually agreed goals to improve and align the acceptable FM's SLA. The communication between both parties is a key success factor for FM service delivery. Tenants are ENCO's primary customers who have direct communication platform with ENCO. ENCO needs to ensure the effectiveness and efficiency of FM product complying with tenant's requests and requirements. ENCO, thus, establishes the monthly open forum between ENCO and tenants to discuss and exchange data, information and feedback to improve facilities services and initiate further development. This meeting not only enables better communication between ENCO and tenants but also allows each party having joint problem solving with other stakeholders such as service providers.

Value added position

The standardization and consolidation of the FM product among different PTT subsidiaries' FM practices and locations can be seen as a one-off value added to PTT. PTT can eliminate the redundancy of FM product and reduce the operating and administrative cost. The best PTT value added position on a product-process matrix is **enable** because it's centralizing this business sector into single location and managed by an internal FM organization will optimize the effectiveness and the efficiency of FM product and FM process. ENCO does not provide the one of a kind FM product which is highly customized to PTT but rather contributes the new FM provision arrangement that adds value to the PTT's core business.

THAI central government: Centralized office campus

Case summary

THAI central government established Dhanarak Asset Development (DAD) as the independent subsidiary company of Thai central government for managing FM provision and service including space acquisition for this government office complex. Previously 35 state agencies rented and leased their workplaces spreading over Bangkok greater area. Thai central government then initiated an office campus project as a state

property management project that creates a new dimension of public administration by offering sufficient working space to government agencies at the right budget. Each of the governmental business units served as a primary tenant shares FM products in the common areas. Each tenant is the governmental business units individually managing its space and FM products but the common area are managed by DAD. The shared FM provision arrangement is characterized as the shared service center that intends to contribute the readiness of FM products to its tenants. DAD is established as a profit center by charging the rental and FM operating fees from its tenants at the market price.

FM specialized abilities

Thai central government initiated the new office campus project where each public department from different locations shares the common area and related FM products in order to minimize the redundancy of workplace and FM products among its public departments. The central location can be considered as **site asset specificity**. The FM organization from the central government provides the standardized FM product in the common area such as security, cleaning service, reception, gardening, landscaping and parking area. DAD can increase the power of negotiation with FM services and suppliers by consolidating FM products into shared FM products. All the public departments can benefit from economies of scale and scope which is perceived as **dedicated asset specificity**.

Value added

This initiative of Thai central government can be seen as the concept of shared services. Shared services can be a source of added value by standardization of FM product, consolidation of common functions across the multiple organizations, reduction of the redundant administrative information processes and transaction cost reduction. Cost reduction is the main motive to establish shared services by obtaining the economies of scale, reducing overcapacity among Thai governmental business units by consolidation, lower control and maintenance costs, accountability of control, control of costs and better cost predictability.

FM product

This governmental office project creates the organizational capacities and capabilities by consolidating the de-centralized office buildings from multi –office locations into one single office campus. This can be considered as a **no-frills product**. As mentioned governmental business units can share standardized FM products in the common areas. DAD does not provide the cutting–edge FM product to its tenants but the main FM product delivering from DAD is the strategically central office campus.

FM process

Due to an entire organizational change, executing shared service demands the high switching and start- up cost. But the collaborative relationship between DAD and governmental business units is not close engagement in the organizational structure because each of tenants manages and arranges its own FM product which is considered as transactional partnership. They only share mutual agreement about shared

FM products on the common areas. Moreover, when consolidating the duplicated FM functions from the existing organizations, an organization inevitably has to confront with job-cutting and employee lay off issues. The shared FM product and location combine the benefits of centralization and decentralization by performing standardization of FM product and practices while the FM organization can quickly respond to tenant's needs and requirements.

Value added position

The possible value added position on product-process matrix is **enable** because this given FM initiative allows the one-off organizational capacity and capability by reducing the FM operating costs and offering the centrally convenient location. Although, DAD does not provide the customized FM product, at the initial phase of office relocation, DAD and the governmental tenants need to be closely collaborating in order to match the right FM product with their tenants' expectations.

DUTCH central government: Cutting the cost by sharing FM provision and services

Case summary

During financial crisis, the Dutch central government had to reduce operating cost and labor workforces among thirteen government departments. Each of them had its own FM organization and provision arrangement and practices. It caused redundancy and non-standardized FM products and practices among each DUTCH state agency. In order to reduce the operating costs, leverage the working standard and standardize work practices the Dutch central government commenced the organizational merger and consolidation from thirteen business units into one standard format. FM as a support function from each public department was amalgamated into one single department and reports directly to the central department. The new merged FM organization aims to manage and supervise FM service and service providers.

FM specialized abilities

This initiative can be seen as the FM shared services organization by consolidating the support functions and non-strategic activities such as FM into a separate entity. A new established FM organization can be a source of added value by service standardization, consolidation of common functions across the multiple organizations, economies of scale and scope, reduction of the redundant information processes and transaction cost reduction. The aim of consolidation of FM products in the Dutch central government is to achieve the benefits of economies of scale and scope by standardizing FM service provision, quality and process into single entity. This innovative FM provision arrangement can be considered as **dedicate asset specificity**.

Value added

The Dutch central government can reduce the operating and administrative cost by obtaining the economies of scale, reducing overcapacity by consolidation, lower control and maintenance costs, accountability of

control, control of costs and better cost predictability. The shared service among thirteen governmental business units combines the benefits of centralization and decentralization by performing the standardization process while quickly responding to needs and requirements. This FM provision arrangement enables the Dutch central government to access cutting-edge technology, increase the flexibility of technological uses by sharing cost and investment with thirteen business units. Moreover, shared service standardizes technological platforms, expertise, information security and authorization.

FM product

The characteristics of the FM product of Dutch central government are standardized and stripped down. The scope of FM products covers space acquisition, facilities management and asset management for all public departments. But the added value from FM product is about the novelty of FM provision arrangement involving organizational and business process re-design. The consolidation and standardization is an organization form by bundling of selections of FM provision and services into one single entity, such as CREM, workplace management, facility service to facility operation and maintenance. FM organization as an organizational support function is the main driver to assist Dutch central government cutting the redundancy FM cost of operating and administration. This FM shared service initiative can be considered as **ad-hoc**.

FM process

According to Maatman et al. 2010, shared service initiative will optimize the complicated hierarchical control, enhance credibility and solve internal conflicts by reducing the redundancy of multiple support organizational functions. In order to standardize thirteen FM organizations with different FM practices and standards into one single entity, each of them has to collaborate and exchange its own FM knowledge and expertise which is considered as transactional partnership. Connell (1996) suggests that shared service accumulates intellectual and capital assets in a single organizational unit has the advantage of having a large number of experts on hand to deal with complex issues, which often is not possible in small organizations. Thus Dutch central government requires transactional partnership among thirteen FM organizations.

Value added position

This type of added value is considered as a one-off value adding to the DUTCH central government. The new FM organization is perceived as a cost center providing the stripped down FM services and provisions to new merged organizations. The best value added position for this case should be **enable** because it helps the Dutch central government to optimize its FM service and outcome including downsize FM workforce. This organizational change process requires high degree of collaboration and involvement from each business unit. This initiative creates value to the Dutch central government by getting the benefit from economies of scope and scale. The host organization can increase the power of negotiation with FM suppliers and service provider.

PTTEP: Retaining incumbent FM blue collar workers with above the line fringe benefits

Case summary

PTT Exploration and Production (PTTEP) is a subsidiary of PTT operating oil exploration and production which is a core business of PTT. PTTEP's headquarter office shares common areas such as main reception, parking lot, main elevator and catering with other PTT's subsidiaries companies. PTTEP manages its own FM product by contracting out to third party providers such as reception, security, concierge services, security guard, cleaning, documents and mail services. At PTTEP, information security is the top priority issue covering, physical, data and information aspects. PTTEP's primary activities require trusted and skilled FM workers – especially blue collar workers at the operational level. Thus, FM blue collar workers are also considered as a part of PTTEP's day-to-day employee because they are allowed to access all areas equivalent with PTTEP's employees. The challenge of managing FM workforce is a high rate of FM staff turnover occurring because the FM blue collar job is only routine job tasks, low pay and fringe benefits, and unstable position. PTTEP had experienced the leaks of confidential information from temporary FM workers and it has caused PTTEP security problems and loss of business opportunity. PTTEP then requires the most trusted employee working within its organization at all level.

FM specialized abilities

In order to decrease the churn rate of FM employees, attract and retain trusted and skilled workers and increase employee loyalty, the FM department initiated the collaboration with PTT's HR and service providers. PTTEP offers fringe benefits above average to FM blue collar workers and treats them as internal PTTEP's employees. The requirement of given type of FM workforce is considered as a **human asset specificity**. In cases of contractor termination and vendor switching, PTTEP still continually hires the incumbent FM staffs but selects the new service providers to supervise them on a regular basis. With this HR policy PTTEP can retain the trusted and skilled FM blue collar workers with greater employees' loyalty. The average working duration of FM blue collar workers is around 7-15 years. This collaboration initiative also can be seen as **brand asset specificity**. It increases PTT reputation as PTTEP's host organization to be one of the most attractive workplaces in Thailand.

Value added

Although standardized FM products such as cleaning, reception and security in the typical office areas indirectly influence PTTEP's primary activity, FM blue collar employees can add value by ensuring PTTEP's business operation and continuity. The trust and skilled workers at the FM operation level, who are allowed to access all of PTT's strategic areas, can assure the information security in PTTEP's workplaces. According to its retaining incumbent FM blue collar workers initiative, it enables PTT brand reputation among other leading corporations in Thailand. It can attract and retain the potential employees in the future.

FM product

PTTEP's primary activities require trusted and skilled FM workers – especially blue collar FM workers who perform day-to-day task in PTTEP's workplace. FM workers can ensure the operation of PTTEP's primary activities and business continuity which is perceived as a **nail down product**. FM blue collar workers are also considered as a part of PTTEP's primary activities because they are allowed to access all areas equivalent with knowledge PTTEP's employees. However, the challenge is a high rate of FM staff turnover occurring because the FM blue collar job is only routine job tasks, low pay and fringe benefits, and unstable position. In order to decrease the churn rate of FM employees a need to attract and retain trusted and skilled workers and increase employee loyalty, the FM department initiated the three pillars collaboration among PTTEP, PTTEP's HR and external service providers. PTTEP offers the fringe benefits above average for FM blue collar workers. The fringe benefit package included family health insurance such as dependent, spouse, parents, kid education, housing mortgage aid program and retirement plan.

FM process

PTTEP works closely with its FM organization which is considered as operational partnership. PTTEP focuses only on the quality/output of services delivered from the vendors rather than the working processes. PTTEP as a client is not responsible for FM blue collar workers, who provide FM services at the operational level such as reception, security, concierge services, security guard, cleaning, document and mail services. This initiative requires the collaborative relationship from three groups 1. PTTEP's HR, 2. PTTEP's FM and 3 external service providers. PTTEP subsidizes the financial aid in a fringe benefit form to FM blue collars through FM service providers who are the legal employer. PTTEP is not responsible for workforce and human assets. The reason why PTTEP hires the FM staffs by itself is that PTTEP does not have professional skills and training. It would be benefit for PTTEP's core business to contract out these given tasks to external professional entities. In cases of contractor termination and vendor switching PTTEP still hires the incumbent FM staffs but selects the new service providers to supervise them on a regular basis.

Value added position

PTTEP's FM offers the nail down FM product from the reliable FM blue collar worker that impacts the operation of PTTEP's primary activities and business outcome and continuity. The closed collaboration between PTTEP's core business and FM organization can be considered as operational partnership because FM process that FM organization highly engages the core business's activities. The best possible value added position of PTTEP on the product-process matrix should be **ensure** because the reliability of FM workforce is the first priority and PTTEP can optimize the appropriate FM process to deliver FM product.

WITHIN CASE ANALYSIS

Table 3 below summaries the seven case analyses based on FM product-process matrix.

Table 3 Within case analysis

Charateristic attributes	Case						
	LEGO	Mærsk	HKSTP	ENCO	THAI	DUTCH	PTTEP
FM specialized abilities	Human Procedural Temporal	Dedicated	Dedicated Human Procedural Site Brand	Dedicated Human Site	Dedicated Site	Dedicated	Human Procedural Brand
FM product	Nail-down	No –frills	Nail-down	Ad-hoc	Ad-hoc	Ad-hoc	Nail-down
Key objective	To ensure organizational productivities by embracing with organizational primary activites	To support the primary activities with the lowest cost	To ensure organizational productivities by embracing with organizational primary activites	To enable the current organization strategy	To enable the current organization strategy	To enable the current organization strategy	To ensure organizational productivities by embracing with organizational primary activites
Strategic intent	Exceed the basic needs/ Best in class	Meet the basic needs	Exceed the basic needs/ Best in class	Fulfill the speicfic needs	Fulfill the speicfic needs	Fulfill the speicfic needs	Exceed the basic needs/ Best in class
Primary stakeholder	Board of business unit directors	Client	Business units	Client and business units	Client	Client	Business units
Performance metric	Satisfaction	SLA, KPI	Business continuity	Capability creation	SLA, KPI	SLA, KPI	Business continuity
Core-Periphery	Involve in organization primary activities	Almost irrelevant from Mærsk's primary activity	Involve in organization primary activities	Compatible with a current organization strategy	Involve in organization primary activities	Almost irrelevant from organization primary activity	Involve in organization primary activities
FM process	Transactional partnership	Transactional partnership	Arm's length	Arm's length	Arm's length	Arm's length	Operational partnership
Types of input/output sharing	Knowledge	Data	Knowledge	Information	Data	Data	Knowledge
Direction of input/ output transferring	Multi-channel symmetry	Top-down asymmetry	Multi-channel symmetry	Top-down asymmetry	Single-channel symmetry	Single-channel symmetry	Single-channel symmetry
Contractual agreement	Risk, benefit, trust, and commitment	No risk and benefit sharing	No risk and benefit sharing	No risk and benefit sharing	No risk and benefit sharing	No risk and benefit sharing	Trust sharing
Time frame	Medium-Long	Short-Short	Medium-Long	Medium-Long	Short-Short	Short-Medium	Medium-Long

Ability to walk away	Low-Medium	High	Low-Medium	Medium-High	Medium-High	Medium-High	Medium-Long
Substitution	Low-Medium	High	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High
Mutual involvement	Medium-High	Low	Low-Medium	Low-Medium	Low-Medium	Low-Medium	Medium-High
Number of FM Providers : Client	1	1	1	1-2	Many	Many	1
Mapping value added position							
Best possible value added position	Ensure	Support	Ensure	Enable	Support	Enable	Ensure
	Color code : Current value added position			Best possible value added position			

The FM product-process matrix is a context- dependent tool that can best be used to analyze within its given organization rather than benchmarking between one organization and other organizations. There are two main attributes that deciphers given organization from the others:

1. **Nature of core business** has its own specific primary activities that justify the needs of FM product specifications. For example, MÆRSK, DUTCH, ENCO and THAI ´s core business activities do not requires best-in class FM product and occasional FM downtimes do not create a critical impact to organizational outcome and impact. In contrast, organizations that need reliable FM product to ensure its business continuity and outcomes such as LEGO, PTTEP and HKSTP need a nail down product.
2. **The managerial belief and perception of corporate value and management** that impact on strategic decisions and other strategic choices for example in house and outsource decision, the involvement and relationship between FM organization and core business. For example, LEGO, PTTEP and HKSTP are located as ensure position but they have different ways to manage their FM provision arrangement. LEGO chooses to keep it FM products in-house, PTTEP chooses to collaborate with its HR department and external service provider and HKSTP chooses to outsource its FM product to capable service vendor with closed supervision.

CHAPTER 5: DISCUSSION ON THE RATIONALE BEHIND THE VALUE ADDED POSITIONS

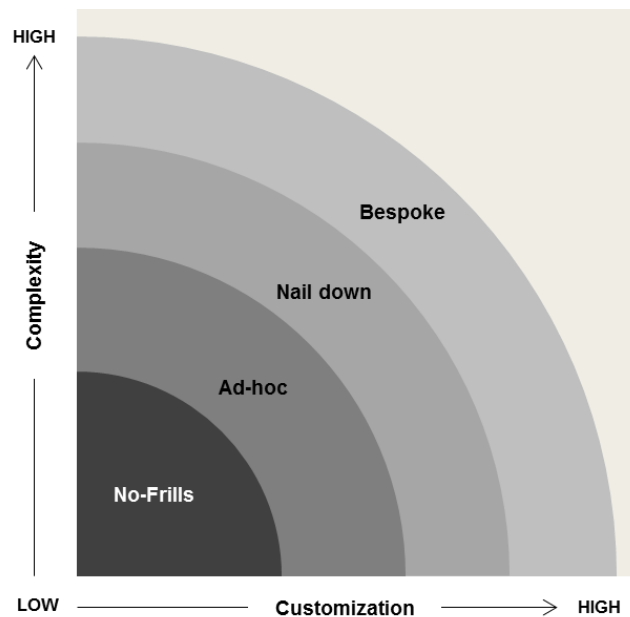
This chapter concludes the discussion on the with-in and cross case analysis in relation to a FM product-process matrix. The main discussion focuses on the rationale behind the value added position, moving upward- downward on the FM product spectrum, moving forward- backward on FM process continuum and moving along the matrix's diagonal.

The analysis of value added positions is based on the strategic intent of the FM organization in the given case studies. An added value in this research can be seen as the "tend-to-be" value added rather than the "have-to-be" value added from FM product. As mentioned, a FM product-process matrix is a visual aid tool for FM practitioners. It can be used to frame the continuous dialog between FM organization and its client and related stakeholders. It helps FM organizations to project the best value added position and to assess the existing value added. FM's client can evaluate and project FM organization's performance vice versa. The main proposition of this research is that in order to best add value to the core business and related stakeholders, FM organizations have to deliver the expected FM product with the appropriate FM process and mismatching will de-value the FM product delivering. Four types of value added positions have emerged from matching FM product with the certain type of FM process. This following section will discuss and explain the relation behind a position on FM product spectrum and FM process continuum that creates four value added positions.

Upward and downward on the FM product spectrum

The FM product spectrum depicts the four types of FM product varied on the degree of specificity between primary stakeholders and FM products. The higher the FM product specificity position is located at the exterior of the spectrum as shown in figure 1, the more it encapsulates prior types of FM product on the FM product spectrum. For instance nail down product will offer not only the high reliable FM product but also standardizing and one –off business capacity and capability. The research proposes that the higher position on the FM product spectrum provides the accumulated value to a core business and related stakeholders. The accumulated value does not imply to adding more value but it refers to FM organizations contributing more than one type of value.

Figure 1 four types of FM products on FM product spectrum



For example, PTTEP's FM delivers a nail down product by offering trust and skillful FM blue collar employees to PTTE's core business activities. PTTEP primary activities are benefited from this FM initiative not only by the reliable FM product but also by an organizational reputation which can be perceived as the ad hoc product that enables the one-off PTTEP capacity and capability.

For example, because the downtime of FM product will significantly impact the production and operation of their organizational productivities, LEGO and HKSTP deliver a nail down product by offering the high reliable FM product and FM technical specialization to ensure their host organization primary activities. LEGO and HKSTP are not only providing the specific FM technical knowledge and expertise but their host organization is also benefiting from economies of scope and scale of FM product.

Moving upward on the FM product spectrum is to increase the level of specificity between FM product and its core business and related stakeholders. The degree of customization and complexity of FM product accumulates from the prior FM product level. The higher specificity generates the more dependency between FM organizations and its stakeholders. The more dependency FM product, FM organizations have to liaison with more groups of stakeholders. From the demand side, the risk of having high dependency with FM product is development of the lock-in situation which can be between core business and its FM organization, FM external service provider and FM employees at both operational and strategic levels. The lock-in situation can raise the high switching cost if clients want to terminate the incumbent service providers and also the transition process from the existing vendor to the new one is more complicated in terms of time, administration and operating costs.

Moving downward on the FM product spectrum is to decrease the level of specificity between FM product and its core business and related stakeholders. The degree of customization and complexity of FM product

lessens from the prior FM product level. The lower specificity generates the lower dependency between FM organizations and its stakeholders. With less dependency FM product, FM organizations have to liaison with fewer groups of stakeholders.

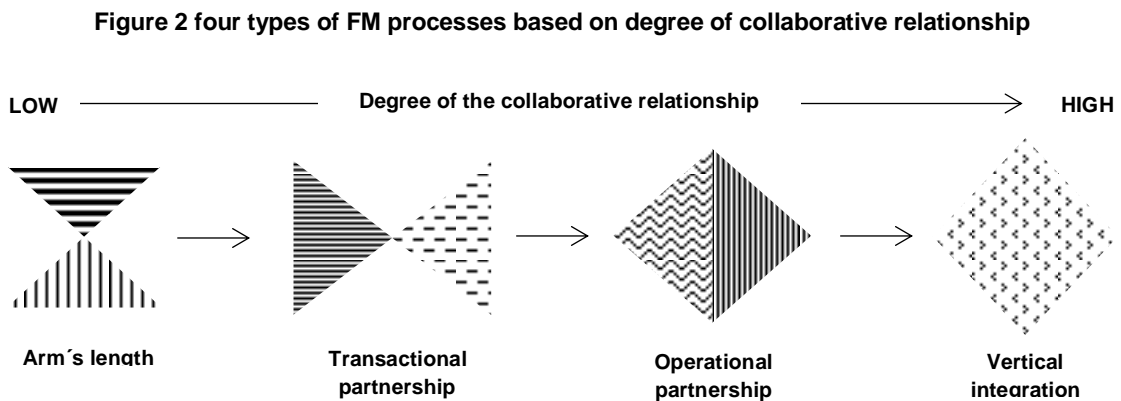
Seven case studies show that every organization requires for FM product the benefit gained and value added from economies of scope and scale that aims to standardize the perceived quality of FM product and to reduce the FM operating and administrative costs. It can be concluded that no-frills product is the prerequisite requirements for FM organizations to deliver to the core business and related stakeholder. The other benefits and value added can be accumulated according to the particular requests and requirements. For example, ENCO and THAI central government can enable their organizational capacity by consolidating the redundancy of office building and centralizing the individual office locations into one office campus. This FM initiative can be considered as ad-hoc product that increases a one-off value creation and responses to the emerging needs from the demand side. This type of FM product would not continually add value and benefit to the host organization from time to time which is differed from a nail down product that can continually sustain and add value to the host organizational primary activities. For example, both HKSTP and ENCO centralized their tenant's individual office locations into one single office campus and shared the common FM product but HKSTP that aims to provide nail down product can create a continual value added to the production and operation of primary activities.

DFM practitioner's feedback pinpointed that at some certain points in time, FM product will reach the stage of FM Product maturity when any of them are commoditized by both internal and external factors such as the maturity of end user's perception toward FM product and the indifference of FM service provider's capacity. In this case, ad hoc product can assist FM organization to stimulate and shift away the FM product maturity situation such as enabling end user's satisfaction and organization reputation. For example, when a FM organization voluntarily introduced and implemented environment assessment methods such as LEED and BREEAM, the host organization can brand itself as an environmentally conscious corporation. But when these environment practices become the basic requirement by laws and other organizations widely practice, those given organization could not sustain this value added. This example can describe the external factor that influences the maturity of value added by FM product. For the internal factor, for instance, when employees who work in the fancy and playful office design and layout such as Google get accustomed to this particular design, they do not any longer feel impressed with their workplace. Designers together with facilities managers may need to stimulate their end user's satisfaction again with new strategies.

The strategic decision on positioning and re-positioning FM product or moving from upward and downward on the FM product spectrum is mainly driven by the characteristic of core business and its primary activities. It is the predetermined condition that justifies the need and specificity of FM product. For example the research and development (R&D) oriented organization such as HKSTP, LEGO and PTTEP are likely to require for more reliable laboratory buildings and workplaces than other types of organizations. FM organizations have to provide the specialized FM knowledge and operational expertise that highly involves in the organizational primary activities and core business.

Forward and backward on the FM process continuum

The FM process continuum exhibits the four types of FM process varied on the degree of collaborative relationship between demand and supply side as shown in figure 2. A supply side refers to primary stakeholders that specify the needs of FM products such as client, customer and end users. A demand side refers to FM organizations that deliver FM product to stakeholders such as in house FM organization, external service provider and FM staff at the operational level. Each of FM process has its particular primary stakeholder based on the need of FM products. Moving forward and backward on the FM process continuum is either FM manager's discretion or purely client's decision but rather driving by the characteristic of core business and corporate culture.



Moving forward on the FM process continuum is to increase the level of collaborative relationship between FM organization and its primary stakeholders. The higher collaborative relationship increases the level of interdependency between FM organizations and its stakeholders. For example, PTTEP shifts away from arm's length to operational partnership by collaborating with HR and service provider to retain and attract the trust and skill FM operational workers because PTTEP heavily relies on the human asset. Communication platform such as Facility Committee in LEGO is the starting point to increase the level of collaborative relationship between FM organization and LEGO's business units who are the primary stakeholders. The DUTCH central government should move forward from transactional relationship to operational partnership because the consolidation and centralization of FM practices into one standard require a whole organizational reengineering. It impacts on the strategic changes from an organizational level such as organization structures, legal form, form of co-ordination, external market, contractual form, center concept, a departmental level such as service charges, and product/ service portfolio and an individual level such as changing job descriptions and job –cutting/ laying off. On the other hand, THAI central government and ENCO that centralized tenant's office locations into one office campus, should move forward from arm's length to transactional partnership but not operational partnership because they do not standardize each tenant's FM practices, they solely centralize and share the common area.

Moving backward on the FM process continuum is to decrease the level of collaborative relationship between FM organization and its primary stakeholders. The lower collaborative relationship decreases the level of interdependency between FM organizations and its stakeholders. Moving backward can create

value to the demand side by reducing the power of FM organization and interdependency between both parties. For example, this research suggests that MÆRSK should scale down its FM process from transactional relationship to arm's length to avoid and prevent hold- up problem and vendor lock- in situation. It would decrease the degree of interdependency between MÆRSK and JCI in terms of managerial knowledge and operational expertise. If MÆRSK heavily relies on and engages with JCI's capacity and capability, it would be difficult to walk away and find the new compatible FM service providers. The operational partnership among PTTEP's FM with HR and service providers creates value added to internal stakeholders in a measurable way for benefits of receivers and PTTEP. The value added can be considered as CSR activities that are created from FM expertise and core competency. The existing FM contribution to CSR is often seen to be enclosed in its role only for reducing environmental aspects, improving energy performance and reducing waste. This initiative sheds the light on the CSR activities within the organizational value chain which differ from the existing perception of CSR practices.

The consequences of moving forward and backward on the FM process continuum are the ability to walk away and substitution between FM organization and its host organization. Ability to walk away is the possibility for the supply side to terminate the contractual agreement with the clients. Substitution is possibility for the demand side to switch to other possible service providers.

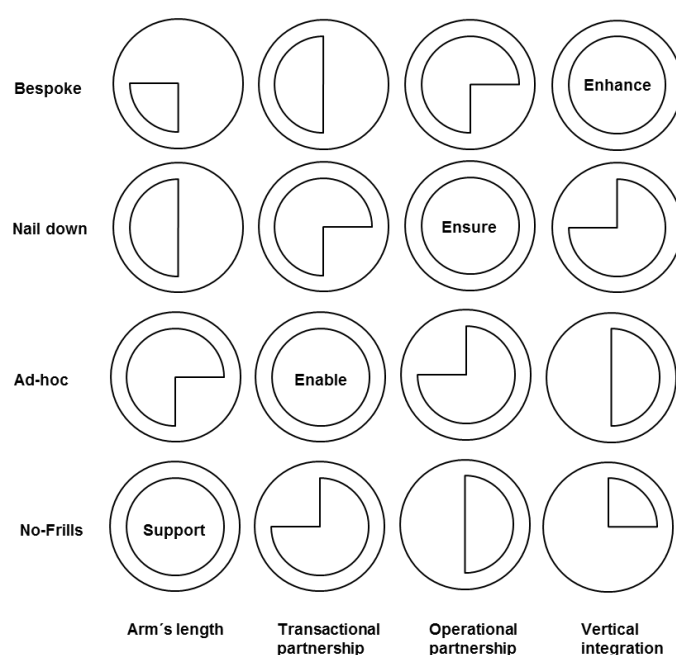
LEGO perceives itself as a family owned corporation and because of LEGO's corporate culture, LEGO's FM preferably manages and keeps FM product in house rather than outsourcing to third parties. In house FM organization can practice and deliver FM products that comply with LEGO code of conduct, corporate culture and operation of LEGO primary activities. The Facility Committee was established in order to collaborate between demand and supply side. It can be seen that a FM organization aims to move FM process forward from transactional partnership which is responsible for one business unit to operational partnership which is the responsibility for the group of LEGO business units.

The primary stakeholder is the board of LEGO business units, especially production and operation in the LEGO production facility. Value added is emerged from the better understanding of operation of LEGO primary activities that is difficult to re-employ by other service providers. On the contrary, MÆRSK's corporate culture is to stick to MÆRSK's organizational capacity and capability of the core business and assign the non- core activities such as FM product to the third parties. MÆRSK decided to outsource FM products to global FM service provider, because JCI has a capacity to manage FM product. Value added is emerged from economies of scope and scale. HKSTP decides to outsource FM products to ISS as a main service provider but also trying to create in house facilities manager that helps to liaison with both demand and supply sides. It is the example of combining both in house's benefit as shown in LEGO and outsourcing benefit as shown in MÆRSK by using facilities manager as a middle man who supervises the single FM service provider, ISS, and liaison with the needs of the internal stakeholders, especially tenants. Value added is emerged from knowledge exchange from external knowhow with internal knowledge.

Along the diagonal

Four value added positions are emerged by matching the needs of FM product and the proper FM process exhibited in figure 3, FM product-process matrix. This research proposes that matching the needs of FM product with the proper FM process will create best value added to the core business and related stakeholders. Each value added position has its own merit and specific value to core business and related stakeholders. From the FM product-process matrix, the FM value added position located on the diagonal of the matrix can deliver the value to stakeholders more than one located off the diagonal. The scope of value added analysis is within the organizational value chain and relationship between FM organization and its selected primary stakeholders.

Figure3. Four value added positions along matrix diagonal



FM organization can create different type of value added by stepping up or down along the diagonal. Step up along the diagonal refers to value added that increases the level of influences on the organizational business outcome. It requires higher degree of specificity from FM product and higher degree of collaborative relationship from FM process between FM organization and given groups of stakeholders.

For example, MÆRSK employs the total FM provision arrangement by globally contracting out FM product to the single FM service provider, JCI. JCI provides the no-frills product which is not significantly relevant to MÆRSK's core business and primary activities, but in the long run the incumbent service provider could cause hold-up situation to MÆRSK because MÆRSK highly relies on JCI's operational and managerial capabilities. JCI also possesses FM managerial knowledge and operational expertise over MÆRSK. The position on the matrix suggests that MÆRSK should scale down and break down the level of dependency and collaboration with its vendor from transactional partnership to arm's length. It aims to prevent the high switching cost from the vendor-lock in situation. The best possible value added position on the matrix is

support because of the arm's length process with the no-frills product. MÆRSK looks forward to be partner with service providers who can run the more tailor-made FM product for a MÆRSK primary activity. For the long run, MÆRSK should not rely on their FM product on one external service provider because it would cause vendor-lock in situation and the switching cost can be high. To avoid and prevent this problem, MÆRSK need to prepare for an exit strategy to leave this relationship in case that MÆRSK wants to switch and terminate the contract with this current FM vendor in the future.

For example, value added positions of ENCO, THAI, and DUTCH are enable because they are responsible for an emerging need and can create value added to the host organizational core business by increasing organizational capacity and capability. All of them use the concept of shared service to manage FM sourcing arrangement and it can be seen as a tool for adding and creating value to the organization. While the main purpose of implementing shared service concept is being cost effective by reducing the operating cost and eliminating the duplicate FM functions, they can improve and standardize the FM product qualities. It allows the host organization focusing on their primary activities with the effective and efficient FM product.

For example, value added positions of HKSTP, PTTEP and LEGO are ensure because they can create value added to the host organizational core business by ensuring operational reliability and business continuity. FM organizations contribute the procedural and temporal specialized abilities to the core business. Because of the nature and requirement of R & D business, they need to ensure the continuity of their host organization's primary activities with the lowest rate of operation downtime and timely manner. These given organizations require the better collaborative relationship between FM organization and its related stakeholders in order to have a better understanding of the production and operation of its organizational primary activities.

Stepping down along the diagonal refers to value added that decreases the level of influences on the organizational business outcome. It requires the less degree of specificity from FM product and the less degree of collaborative relationship from FM process between FM organization and given groups of stakeholders. For example, MÆRSK value added position is support because MÆRSK can create value added to the host organizational core business by economies of scope and scale by outsourcing FM product to the one service provider. It allows the MÆRSK's core business focusing on their primary activities with the standardized FM product and expected cost.

It is a limitation of this research that the seven case studies do not exemplify all four types of value added positions. The enhance position influences the organizational productivities and business outcome but it is not the core business. It is an unconventional role and perception on FM's responsibilities but recently, FM organizations try to involve in this aspect for instance a layout and floor plan of retail areas in a shopping area that navigates shoppers in bottom neck areas and prolongs the shopping time. For the future research, an enhance position should be further investigated and explored in details.

Feedback from a focus group

On October 1, 2012 fifteen FM practitioners from Dansk Facilities Management association (DFM) were invited for workshop to testify and evaluate on the preliminary version of the FM product-process matrix. One week before the workshop, the summary of FM product- process was sent out to participants for a prior understanding of the concept and got acquainted with terminology used. The workshop was started by presenting the concept and practical implications of FM product-process matrix and each participant was requested to response to the main concept of a matrix, terminology used, function of a matrix and ease of use. The participants were grouped into 4 groups and were requested to answer the questions as follows:

- How do you evaluate your respective FM organization's present position in the FM product-process matrix? And how do you evaluate the preferred future position?
- How clearly defined and convincing are the 4 proposed product types (No frills, Ad- hoc, Nailed down and bespoke) in the FM product-process matrix? Have you got proposals for adjustment/improvements?
- How clearly defined and convincing are the 4 proposed process types (Arm's length, Transactional partnerships, Operational partnerships and Vertical integration) in the FM product-process matrix? Have you got proposals for adjustment/improvements?
- How clearly defined and convincing are the 4 proposed value adding positions (Support, Enable, Ensure and Enhance) in the FM product-process matrix? Have you got proposals for adjustment/improvements?
- How do you all together evaluate the strength and weaknesses of the FM product-process matrix as a tool to contribute to dialogue about and evaluation and development of FM organization's positioning in relation to their company to add value?

After 45 minute group work, a representative from each group presented feedbacks on their experiences using a matrix as summarized:

- A proposed matrix can be seen a quick and dirty tool that initiates and facilitates the dialogue between demand and supply side rather than a measurement tool. Value added positions are the static positions, it may not reflect the constant change in a business context. It needs a clearly defined scope of analysis from both parties such as selected topic, who involve in the discussion and the purpose of the discussion. According to three dimensions of matrix, 1. FM product axis 2. FM process axis and 3. Diagonal axis, each axis can be used in different purposes for instance,
 1. **On the FM product axis:** Customers who are liaisoning the need of core business and its end users with FM product delivery such as internal facilities manager can start using the matrix from a FM product axis to justify and decipher the need and requirement of FM product specification.
 2. **On the FM process axis:** FM practitioners who providers FM product at the operational level such

as FM service providers can start using the matrix from a FM process axis to negotiate with its demand side such as end users, customer and client about the right collaborative relationship. As proposed, the match FM process with FM product, FM organization can deliver the added value to the core business and related stakeholder and mismatching will de-value the added value delivering.

3. **On the diagonal axis:** Clients at the strategic level who evaluate the overall benefits and value gained from FM functions to the core business and organization can start using the matrix from the diagonal axis to determine the value added value position that matches with their organizational decision.

- Participants seemed to understand and get accustomed to **support** and **enhance** value added position including related FM product-process because support position is the conventional role of FM organizations and enhance position is the desirable role that FM organizations are aiming for. But the newly introduced value added position as **enable** and **ensure** positions demand more preparation to understand and be familiar with the concept and terminology used. Each group expressed the ambiguity of concept and terminology used between ad-hoc product and nail down product, and transactional partnership and operational partnership.
- Ad-hoc product that enables organizational capacity and capability can be used to stimulate the maturity of FM product from time to time.

CHAPTER 6: CONCLUSION

The chapter starts with the summary of research results, continuing with the practical implication from this research, following with the research reliability and validity and concluding with the further research.

Main research question and main result

The purpose of this study was to increase general knowledge on the contribution of FM for the core business of a host organization and to deepen the understanding of issues related to management of FM function.

The research starts with the main research question: **How FM can best add value to its stakeholders?**

This aims to investigate and characterize when FM organizations can be best add value to different types of stakeholders. Generally, FM function is solely perceived from its management level as an operational support unit which cannot contribute the monetary value to its organizational bottom line. This notion navigates a boundary of FM 's scope, role and function by supporting the operation of organizational primary activities with a cost-sensitive manner. Or other added value aspects are being neglected. The main objective of the research thus is to search for the "other" reasons for existence of FM functions in the given organizations by debunking the management fashion of on-going discussion both in academia and among practitioners. The research findings profile the characteristics of value adding process and indicate under which circumstances FM can best add value to its stakeholders by matching FM product and FM process.

The main result of the research and answer to the main research question is the formulation of the four value adding positions and their associated characteristics of FM related specialized abilities that add and/ or create value to the core business and surroundings. Each type of FM related specialized abilities have a particular characteristic of collaborative relationships between FM organizations and their stakeholders.

1. FM related specialized abilities that **support** the operation of the organizational primary activities running effectively and efficiently with the cost advantage. This type of FM related specialized ability is relevant to dedicated asset specificity that corporations could benefit from achieving economies of scope and/ or scale. FM organizations need to collaborate with a senior management of the given organization. It is the conventional spot- market relationship with the cost-sensitive contractual agreement. The involvement of the FM organization is only at the operational level. FM services and provisions are required as a commodity, which has no significant difference among different FM providers.
2. FM related specialized abilities that **enable** the organizational capacity and capability with the specific organization's demands. FM organizations and their demand side establish one-off decisions and implementations responding to current organizational demands in close collaboration with one or more business unit directors such as marketing, HR, production, R&D and finance. FM organizations offer cutting-edge practices, performance framework, processes and managerial expertise that enable organizational productivity, business profitability, operational efficiency and

effectiveness and also end user satisfaction. This type of FM related specialized abilities encapsulate three asset specificities: brand, site and temporal asset specificity. FM organizations need to collaborate with one or more of the business unit directors and senior management of the given organization. FM providers and their host organizations mutually share economic risk and benefit. However, cost reduction still plays a key role in the decision making process. The FM organizations engage at the operational and tactical levels in order to align FM working processes with the client organization's primary activities.

3. FM related specialized abilities that **ensure** the operation and performance continuity of primary activities continuing to operate normally and without interruption. FM organizations offer FM service and provisions focusing on operational reliability and minimizing the operation downtime. Corporations rely on FM knowledge, workforce, skill and expertise that comply with organizational business processes. This type of FM related specialized abilities covers two asset specificities: procedural and human asset specificity. FM organizations highly collaborate and engage with a board of business unit director particularly production in order to deliver the right FM services with their needs and expectations. FM organizations need to collaborate with a board of business unit directors of the given organization. The FM organizations and their host organizations share mutual risk, benefit, trust and commitment relationship. FM organizations and their client's relations move from spot market-driven relationship towards becoming the preferred partner. FM working processes are incorporated/ embedded into the organizations' primary activities and the client's core business. The degree of knowledge sharing between FM organizations and their clients is high. Facilities managers play a key role from tactical to strategic levels.
4. FM related specialized abilities that **enhance** the operational performance and business outcome of the core business. FM performances immediately and directly impact the end user's perceptions and satisfactions, their specifications are highly customized by end user's requirements in order to enhance end user's satisfaction and increase organizational productivities. Any downtimes will immediately impact on the organizational operation and outcomes. An FM organization co-creates and customizes the FM services and provision specification with all relevant stakeholders involving from client, business units, and end users. This type of FM related specialized ability is relevant to physical asset specificity that highly customizes infrastructure, workspace and FM services to FM's stakeholders. FM organizations collaborate with end users of the given organization. The roles and responsibilities of FM shift away from supportive roles to becoming more influential role to its organizational core business. The scope of FM activities is not only meeting the client's needs but also meeting the end user's needs. The FM organization and its host organization share mutual risk, trust, benefit and commitment including the organizational bottom line. The facilities manager can engage in the client's organization's decision making process. At a strategic level, FM and client jointly create shared innovation and value.

The study introduced a new tool for senior managements and clients as a representative of the demand side and facilities managers as a representative of the supply side, to consider the role of the given FM activities in their organizations and the associated responsibilities that the FM role and responsibilities will be built around. Four value added positions emerged from matching FM product and process as shown:

1. To support the operation of an organization's primary activities with the cost advantage or
2. To enable the organizational capacity and capability with the current organization strategy or
3. To ensure the operation and performance of an organization's primary activities or
4. To enhance the productivity of an organization such as business outcome and revenue

The proposed matrix shows that there are four types of FM's role as discussed above, depending on the nature of the primary activities, corporate culture and the needs of the FM products. The question of finding the best value added position for a given FM position is not addressed in previous literature reviewed. From the matrix is argued that a given value added position has its own merit depending on host organizational core business needs and requirements of FM products. The key premise is that once an FM organization delivers FM products that solve its stakeholders' problems and get the job done, the FM organization already fulfills the most suitable value added delivery to the client's core business and surroundings. This study challenges the conclusion of Kaya and Alexander (2005) that used pattern recognition for classifying FM organizations and concluded that FM organizations are perceived from their stakeholders as a support role. The research revisited and expanded the proposed managerial level of FM researchers on potential leverage of FM role from operational to strategic level. Different stakeholders from various managerial levels would justify the FM organization's role based on their interactions between their activities and FM's performances. The efficiency and effectiveness of different repositioning strategies has not been explained by normative theories of FM in previous seminal frameworks. This contributes to a better understanding of how FM organizations should be structured and organized based on the choices of FM value added positions. A study thus expands on the conclusions of Chotipanich (2011) and Price (2004) on studies of FM strategy by classifying four existing FM value added positions. The question of finding the best value added position for a given FM organization is not addressed in previous literature reviewed. From the matrix it argues that a given value added position has its own merit depending on host organizational core business needs and requirements of FM products. This normative approach offers a systematic tool for repositioning strategies of FM activity and organization from the FM organization level to corporate level within the client's organization. From an FM practitioner's standpoint a product-process matrix has the potential to be useful both as a self-diagnostic tool and as a strategic planning tool. As a self-diagnostic tool the matrix can be useful to FM providers for examining the causes of poor service quality and customer dissatisfaction resulting from a mismatch between FM products and FM processes. An FM product-process matrix provides FM practitioners with a systematic way to investigate their host organization core business and the stakeholders' influence on the determinants of the FM products needed. As a strategic planning tool the matrix can be useful to service providers in designing or redesigning an FM organization by aiding in the choice of FM products and appropriate FM processes. The matrix allows for an explanation of the changes of not only the positioning of

individual FM services, activities and performances but also the restructuring of the entire FM organization within its host organization and other business units. This matrix can be applied not only in the FM industry but also for other organizational support functions such as HR, ICT, finance, and marketing for the mapping of appropriate value added position.

Sub-research questions and the research papers

To unfold the main research question, the sub research questions were formulated as follows:

1. **What are FM 's specialized abilities that create and add value?** This question aims to investigate FM 's core competencies and capabilities that create added value to core business and surroundings.
2. **What are the added values from FM 's specialized abilities?** This question aims to define the value added by FM to its stakeholders.
3. **What are the appropriate context and circumstances to add value focusing on what type of FM product and how is FM product being offered (FM process)?** This question aims to profile the characteristic of value adding process and to search for under which circumstances FM can best add value to its stakeholders.
4. **What are the role and influence of stakeholders on value adding process?** This question aims to explore the role and influence of stakeholders upon FM value adding process.

Sub-question 1 and 2 was answered by a research paper: **“Understanding added value of facilities management from asset specificity perspective”**. This paper aims to investigate the applicability of asset specificity from a transaction cost economy theory as an overarching framework for understanding the notion of added value in facilities management (FM). Sub-question 3 and 4 was answered by research papers **“Mapping value added positions in facilities management by using a product-process matrix”**. This paper aims to present a product-process matrix that assists FM organizations and their stakeholders to map their value added position in their organizations. Using this matrix, FM practitioners are able to assess the existing value added delivering, how it is formulated and identifies actions for improvement. And **“Stakeholder influenced strategy in facilities management: a case study of energy complex (ENCO), Thailand”**. This paper aims to provide insights into stakeholders' behavior that influence FM strategy. This contribution allows FM organizations both in house and FM providers understand each type of relationships with their stakeholders under various different circumstances and conditions.

This dissertation intended to centralize on presenting and developing of a FM product-process matrix however during matrix developing process, four scientific papers was produced (see appendix) based on the same pool of empirical findings as follows:

1. The Concept of Intra-Organizational Corporate Social Responsibility (IO-CSR) for Facilities

Management: By extensive literature review, this conceptual paper aims to demonstrate how FM practitioners can embrace CSR principle by discussing the state of the art of CSR in this industry, arguing that CSR practices should not be considered as just another management buzzword, but as an important vehicle for corporate development and social change. Because of the dual roles of facility end users, people who perceive facility services and people who are stakeholders, then, this research proposes the concept of intra-organizational CSR by changing the primary stakeholder of a CSR issue from society at large into facility end users.

2. Blue collar FM workers as a primary stakeholder: a case study of CSR practices: The paper aims to present how FM organizations can implement intra-organizational corporate social responsibility (IO-CSR) with their partners such as other business units and facilities service providers. It also seeks to investigate how an IO-CSR practice contributes added value to stakeholders and its host organization's core business.

3. FM shared services: an emerging concept of FM provision arrangement: This paper presents the use of shared services in FM from four exemplary case studies. The concept of shared services has been widely used in the provision of organizational support functions for instance finance, IT and HRM. A shared services concept aims to maximize the advantages of centralized and decentralized approaches for service delivering while minimizing disadvantages of both.

Academic and practical implications

The academic implications of this study are gained by proposing new aspects of added value from FM functions and by profiling the suitable contexts and circumstance for FM organization and related stakeholders to add value. By using asset specificity theory, this research also proposes that the degree of specificity of FM products and services in the transactional relationship can be implied as the degree of value added undertaking by FM organization to its host organization including clients, end users and surroundings. The study intends to unfold the unarticulated notions of added value of FM. A better understanding of added value will broaden the management's perceptions of FM provision's abilities and utilities. The findings provoke the on-going discussion in FM, both in academia and among practitioners, that being at a strategic level is not a prerequisite condition to add value to the host organization's core business and stakeholders. The research investigates how stakeholder's behaviors influence FM strategy. It provides new insights into stakeholder management in FM as a starting point for value adding to host organization's core businesses.

The practical result is a normative FM value added position matrix that illustrates FM value position which is the relative value delivering position from the FM organization to its stakeholders. This decision making tool can be used to assess the existing FM value position choice and project for the next desirable value position.

It can be used to frame and reframe the dialogue between stakeholders and facilities managers both from the internal FM organization and to service providers. A proposed framework is an extended framework of Frooman's typology, (Frooman, 1999) to understand and explain the strategies and actions that FM organizations and stakeholders adopt against each other in a conflict situation. It allows FM organizations to assess their stakeholder behaviors that influence FM strategic decisions and vice versa.

This normative approach offers a systematic tool for repositioning strategies of FM activity and organization from the FM organization level to corporate level within the client's organization. From an FM practitioner's standpoint a product-process matrix has the potential to be useful both as a self-diagnostic tool and as a strategic planning tool. As a self-diagnostic tool the matrix can be useful to FM providers for examining the causes of poor service quality and customer dissatisfaction resulting from a mismatch between FM products and FM processes. An FM product-process matrix provides FM practitioners with a systematic way to investigate their host organization core business and the stakeholders' influence on the determinants of the FM products needed. As a strategic planning tool the matrix can be useful to service providers in designing or redesigning an FM organization by aiding in the choice of FM products and appropriate FM processes. The matrix allows for an explanation of the changes of not only the positioning of individual FM services, activities and performances but also the restructuring of the entire FM organization within its host organization and other business units. This matrix can be applied not only in the FM industry but also for other organizational support functions such as HR, ICT, finance, and marketing for the mapping of appropriate value added position.

Reliability and validity of the dissertation

The logic of this research reasoning was an abductive reasoning. The research used triangulation methodology to verify the reliability of research results and findings. The research process progressed by developing the preliminary FM product-process matrix through literature review, testifying and applying the proposed matrix through empirical data and disseminating findings and analyzing into scientific papers. This dissertation connects the inter-connected scientific papers into a coherent entity and provides the comprehensive overview of the whole research. The validity of this dissertation consists of the contribution of six inter-connected individual scientific papers which were peer-reviewed and evaluated individually when published in academic conference proceeding, book or submitted to journals. Furthermore, the research was also revised by the feedbacks from the articles reviewed and revised. The reliability of the dissertation was supported by reporting both the research methodology and the results on a detailed level in both the appended papers and a research dissertation. The findings and results from this phase was further reviewed and assured by a group of 15 FM practitioners. Applying from theoretical framework to empirical evidences is considered as deductive reasoning. The formulated FM product-process matrix was refined and amended by results from case studies and focus group. Refining the theoretical framework from the empirical evidences is considered as inductive reasoning. This research employed both types of logic in order to develop the FM product-process matrix and is considered as an abductive reasoning research. The workshop on the focus

group of the 15 Danish FM practitioners from Dansk Facilities Management Netværk (DFM) provided and amended on the use and function of a FM product-process matrix. The workshop was started by presenting the concept and practical implications of FM product-process matrix and each participant was requested to response to the main concept of a matrix, terminology used, function of a matrix and ease of use. The results and feedback from this workshop were used to refine and reshape the preliminary version of the matrix and it shown in the overall dissertation.

Suggestions for future research

This research opened new and different aspects for further FM research. The example on added value of FM functions from asset specificity perspective can be further discussed and developed in other venues and contexts. A better understanding on added value from FM functions still has to be depicted and demonstrated in order to strengthen both FM professional recognition and related stakeholder benefits. The role and influence of stakeholders on the value adding process were researched only within the FM's host organization such as direct FM end users who perceive FM product, customers who supervise the activities and process of FM product delivering and clients who navigate the overall FM strategy. But the external stakeholder such as local community and others who indirectly perceived the outcome of FM organization's activities was excluded from this research. For the extensive research on the role and influence of stakeholder, the external stakeholder should be incorporated into the scope of analysis. The use of FM shared services can be seen as the emerging sourcing arrangement in FM organizational structures. Knowledge and expertise management are the key success factors for obtaining the benefits from this new organizational model.

The FM product-process matrix is naturally oversimplified and parsimonious. It represents an explorative work in nature. The role and influence of stakeholders including end users, customers and external FM service providers have been examined and discussed. The proposed theory is a static framework that cannot encompass the actual strategy as an event unfolds. In order to validate a FM product-process matrix, it can be further developed and applied into various types of contexts such as business context, culture, strategic choice, size of organization, managerial style, the primary stakeholder, core business and primary activities. The proposed matrix needs more empirical validations. A logical extension for further research is to conduct empirical analyzes to validate the categories of the FM product structure and the stages of the FM process structure in cross-sectional and longitudinal empirical analyses. It would be to empirically investigate how the fit between classifications of the FM product structure and stages of the FM process structure impacts stakeholder's perceived value and how stakeholder's influence determines the choice of FM product and FM process. All the value added positions on the proposed product-process matrix need more quantitative-empirical study. It should determine which FM value added position is best or which criteria are best per axis.

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LIST OF APPENDED PAPERS

This dissertation summarizes the following publications as shown in table 1:

Table 1 shows six publications that were included in this dissertation

Title	Status	Contribution of the author
Paper1: Understanding added value of facilities management from asset specificity perspective	Submitted to <i>FACILITIES</i> on October 19, 2012 and received the response with major revision on January 1, 2013	Fully responsible
Paper2: Mapping value added positions in facilities management by using a product-process matrix	Accepted to be published in <i>JOURNAL OF FACILITIES MANAGEMENT</i> (12-Jul-2013 vol:11, iss:3)	Fully responsible
Paper3: Stakeholder influenced strategy in facilities management: A case study of energy complex (ENCO), Thailand	Published as book chapter in Jensen, P.A. Voordt, T.v.d .and Coenen, C (eds.): <i>The Added Value of Facilities Management – Concepts, Findings and Perspectives</i> . Centre for Facilities Management - Realdania Research, DTU Management Engineering, and Polyteknisk Forlag, May 2012.	Fully responsible
Paper4: The Concept of Intra-Organizational Corporate Social Responsibility for Facilities Management	Accepted to be published in <i>INTERNATIONAL JOURNAL OF FACILITIES MANAGEMENT</i>	Fully responsible
Paper5: Blue collar FM workers as a primary stakeholder: A case study of CSR practices	Published in Euro FM conference proceeding, EFMC 2012, Copenhagen, Denmark: Junghans, A. and Jensen, P.A. (eds.): <i>Proceedings of the 11th EuroFM Research Symposium - 24-25 May 2012 in Copenhagen, Denmark</i> . Centre for Facilities Management - Realdania Research, DTU Management Engineering, and Polyteknisk Forlag, May 2012.	Fully responsible
Paper6: FM shared services: an emerging concept of FM provision arrangement	Submitted to <i>JOURNAL OF FACILITIES MANAGEMENT</i> on January 28 , 2013	Fully responsible

There are four publications that were produced during the study but are excluded from the dissertation as shown in table2.

Table 2 presents other publications that were published during PhD study

Title	Status	Contribution of the author
Paper1: Before Jumping On the CSR Bandwagon: Do We Have a Parachute?	Published in International FM & REM Congress, University of Kufstein Tirol, Austria, January 2011	Fully responsible
Pape2: Classifying FM Value Positioning By Using a Product - Process Matrix	Published as chapter in Jensen, P.A. and Nielsen, S.B. (eds.): <i>Facilities Management Research in the Nordic Countries – Past, Present and Future</i> . Centre for Facilities Management - Realdania Research, DTU Management Engineering, and Polyteknisk Forlag, January 2012.	Fully responsible
Paper3: Value adding management: A concept and a case	Published as book chapter in Jensen, P.A. Voordt, T.v.d .and Coenen, C (eds.): <i>The Added Value of Facilities Management – Concepts, Findings and Perspectives</i> . Centre for Facilities Management - Realdania Research, DTU Management Engineering, and Polyteknisk Forlag, May 2012.	Responsible for the empirical part
Paper4: Positionering af FM organisationer for at skabe merværdi: en produkt-proces matrix (Positioning of FM organisations to create added value: A product-process matrix).	Article in <i>FM UPDATE</i> #15, September 2012, pp. 26-29	Fully responsible

Understanding added value of facilities management from asset specificity perspective

Abstract

Purpose – To investigate the applicability of asset specificity from a transaction cost economy theory as an overarching framework for understanding the notion of added value in facilities management (FM).

Design/methodology/approach – This paper exploits asset specificity as a point of departure for identifying the added value in FM by comparative analysis of asset specificity with empirical findings from seven FM exemplary case studies in the public, private and state owned sector.

Finding – The added value of FM to clients can be demonstrated through the seven dimensions of asset specificity namely physical, dedicated site, human, brand, procedural and temporal asset. These seven FM related asset specificities create four types of value adding position: *support* the operation of the organizational primary activities, *enable* the organizational capacity and capability, *ensure* the operation and performance continuity of primary activities and *enhance* to operational performance and business outcome. This finding revisits a client's view on the FM activities and performance to business outcome and surroundings based on FM's specialized abilities.

Research limitations/implications – Seven exemplary cases provide the preliminary understanding of asset specificity applied in three sectors but still limited with the size of sample. For the generalizability, larger sizes of empirical studies need to be carried out.

Practical implications – The paper explains the rationale behind three strategic dilemmas: What is the boundary of FM's scope, role and function in the given organization? What/ under which circumstances is the most effective and efficient collaborative relationship between FM organizations and their clients? And which FM functions should be outsourced or not, and why?

Originality/value – There is a shortage of studies applying asset specificity theory in the FM literature.

Keywords - Added value, Asset specificity, Facilities management, Transaction cost economy, Case study

Paper type - Research paper

INTRODUCTION

Michael Porter's organizational value chain (Porter, 1980) divides business units into two building blocks: (1) Primary activities are organizational core competencies that possess the competitive advantage to surpass their business competitors. They create the monetary value to the organization and are perceived as a profit center. Examples of primary activities are inbound logistics, marketing and sales, operations, and service. (2) Support activities are an organizational non-core competency that supports the operation and production of the primary activities. They create the non-monetary value, and are thus considered from corporate management as a cost center. The only monetary value contribution from support activities is operational cost minimization. Examples of support activities are firm infrastructure, human resource management (HRM), information technology (IT), procurement and facilities management (FM).

FM is the integration of processes within an organization to maintain and develop the agreed services which support and improve the effectiveness of its primary activities, (CEN, 2010). Services are ranging from office administrative service to workplace acquisition. Regarded as a non-organizational core competency and non-critical function, support activities such as FM activities are likely to be performed and contracted out to third parties who hold specialized knowledge and expertise. This "lean and mean" provision arrangement assists corporate management to streamline their focal point into conventional value added activities. This managerial perspective itself limits the boundary of FM's scope, role and function. The added value creation from FM is only to achieve service level agreement (SLA) as promised at the minimum cost. Or other added value aspects are being neglected.

This paper intends to unfold the unarticulated notions of added value of FM. A better understanding of added value will broaden the management's perceptions of FM provision's abilities and utilities. The research deployed the asset specificity theory as an overarching framework for identifying the added value in FM by comparative analysis of FM literature with empirical findings from practices. Based on the level of asset specificity FM practitioners and clients formulate an appropriate organizational structure and provision arrangement. FM organizations and their clients can optimize their existing collaborative relationship corresponding with their new perception on FM provisions. It helps managements to make the decision on which FM functions that should be outsourced and / or kept in-house. And what/ under which circumstances are the most effective and efficient collaborative relationship between FM organizations and their clients?

The implication and applicability of asset specificity will be exemplified through seven FM organizations covering public, private and state-owned sectors. The empirical data collection was carried out by semi-structured interview with both *demand side* such as client, customer and end users and *supply side* such as in house FM related managers from strategic, tactical and operational levels including FM service providers. The main interview theme focuses on an aligning of perception from demand side and implementation from supply side on added value of FM.

OVERVIEW OF ASSET SPECIFICITY

Coase (1937) was the first researcher who raised the question of what drives organizational form. And he developed widely the theoretical framework referred to as transaction cost economy (TCE) and the essence of his theory is “economizing on transaction costs would determine the organization of economic activity, and the division of activity between firms and markets” (Milgrom and Roberts, 1992, p. 51). He proposed that a firm will replace the market when the costs of transacting within the firm are less than the costs of transacting through the market. The manner in which a transaction is organized depends on particular attributes of the transaction. Most TCE researchers (Williamson, 1979, 1985, 1996) discuss three critical transaction attributes: (1) Asset specificity; (2) Uncertainty; and (3) Frequency. Asset specificity is argued to be the most important factor alongside uncertainty and transaction frequency in determining the choice of governance, namely hierarchy or market.

Asset specificity was firstly described as the ‘specialized ability’ by Marshall (1949, p. 172) in the transaction relationship that is required for particular functions and requirements. Williamson (1985, p. 95) who populated this term, defines asset specificity as ‘the degree to which an asset can be redeployed to alternative uses by alternative users without sacrifice of productive value’. TCE suggests that asset-specific investments should only be deployed on the expectation of substantial cost savings and/or value-adding advantages, but it also posits that asset specificity increases the hazards of opportunism and the transaction costs necessary to safeguard against the risk of opportunistic expropriation (Heide and Stump 1995; Parkhe 1993).

Based on the level of asset specificity firms formulate an appropriate governance structure, with inter-firm relationship performance expected to be maximized when opportunistic behavior incentivized by asset specificity is reduced (David and Han 2004; Lui et al. 2009; Rindfleisch and Heide 1997). De Vita et al. (2011) conclude that the degree of customization is, in turn, determined by the degree of uniqueness of the assets deployed to the activities or functions being performed (Erramilli and Rao 1993; Widener and Selto 1999), and by the extent of the transferability of such assets to other activities outside that relationship to the third party (Brown and Potoski 2005; Espino-Rodríguez and Gil-Padilla 2005; John and Weitz 1988; Morill and Morill 2003; Murray and Kotabe 1999).

De Vita et al. (2011) explain the usage of asset specificity as a core concept of TCE (also commonly referred to as transaction cost theory, TCT), which is still seen as the dominant theoretical framework for studying organizational boundary choices (Geyskens et al. 2006). In particular, asset specificity has become a key construct in research into make-or-buy decisions (Espino-Rodríguez et al. 2008) and the performance of buyer–supplier relationships (Artz 1999; Haugland 1999; Heide and Miner 1992; Heide and Stump 1995; Lui et al. 2006, 2009).

SEVEN DIMENSIONS OF ASSET SPECIFICITY

As mentioned above the focus of this study is restricted to the asset specificity dimension of TCE. Asset specificity consists of seven dimensions: (1) Human asset specificity; (2) site asset specificity; (3) physical asset specificity and (4) dedicated asset specificity, to which both (5) brand asset specificity (Williamson 1985) and (6) temporal specificity (Malone et al. 1987; Masten et al. 1991) were later added. Further, Zaheer and Venkatraman (1995) added (7) procedural specificity to tailor the asset specificity construct to the context of the service industries. The characteristics of each dimension are described below.

1. **Human asset specificity** refers to the degree to which skills, knowledge and experience of a firm's personnel are specific to the requirements of dealing with other firms (Zaheer and Venkatraman, 1995). It encompasses any unique knowledge or skill that suppliers develop through training, and represents specialized know-how or experience specific to a particular employer/employee relationship, i.e. the knowledge or skill is not transferable as it has limited relevance to other job situations, Lamminmaki (2005). Dibbern et al. (2005) consider human assets as knowledge specific assets that arise from learning-by-doing (Williamson 1996), and which are not easily transferable, owing to their limited application in other work settings (Lamminmaki 2005). De Vita et al. (2011) also add that human asset specificity involves not only the expertise that is required for carrying out a particular activity, but also the costs of training and the development of a corporate culture that facilitates the interaction within the transactional relationship, (Ruchala, 1997). It includes supplier's access to the buyer's confidential information (Anderson 1985; Anderson and Schmittlein 1984; Klein et al. 1990; Weiss and Anderson 1992) and the annual hours spent by the supplier's personnel interacting with the buyer (Dibbern et al. 2005).
2. **Site asset specificity** refers to the transaction relationship when the buyer and the supplier are in close proximity to a buyer or seller in terms of site, location and facility production. This aims to reduce inventory and other related processing costs, De Vita et al. (2011). De Vita et al. (2011) remark that once in place, the site asset specificity involved is highly immobile, and thus the cost of their relocation is very high (Joskow, 1988; Lamminmaki, 2005; Morill and Morill 2003; Williamson, 1983).
3. **Physical asset specificity** refers to investments in physical assets that are tailored to a specific transaction and have few alternative uses, owing to their specific (design) characteristics (Joskow 1987, 1988; Morill and Morill 2003). Comparing with human asset specificity it is more tangible to measure and assess the uniqueness of equipment and tools required by the supplier for the purpose of the transactional relationship (Klein and Roth 1990; Stump and Heide 1996; Walker and Poppo 1991). This asset concerns investments in physical assets relating to a particular transactional relationship. For example, Milgrom and Roberts (1992) refer to a wing producing facility investment made by a Boeing supplier. These wings are customized to a particular Boeing plane and cannot be redeployed by others. Therefore the investment limits use value in other wing transactional relationships.

4. **Dedicated asset specificity** refers to assets that are of general purpose as opposed to specialized uses (physical asset specificity), but which have been made for a particular transactional agreement that is likely to entail a long-term relationship, De Vita *et al.* (2011). Lamminmaki (2005) provides the example from the hotel industry as a hotel might expand its facilities on the assumption that delegates from a neighboring conference venue will use its facilities. This can be seen as closely associated to reputation investment (Lohtia *et al.*, 1994). Contractual problems can arise when one party has control of activities that can damage the brand reputation of a second party.

5. **Brand asset specificity** refers to organizational reputation. For instance, a supplier could find himself in a position enabling him to directly or indirectly cause damage to the client's reputation (Gatignon and Anderson 1988; Lamminmaki 2005; Lohtia *et al.* 1994). A buyer- supplier relationship involving activities which have a direct and great impact on the overall business performance and brand reputation could be considered as high brand asset specificity.

6. **Temporal asset specificity** refers to the matching of timing and co-ordination required by a transactional relationship of buyer and supplier. This concerns investment where timing and coordination of activities is critical, i.e. timing and coordination represent the high temporal asset, Lamminmaki (2005). The unsuccessful co- coordinating leads to the failure of business outcome. As Malone *et al.* (1987, p. 486) define: 'An asset is time specific if its value is highly dependent on it reaching the user within a specified, relatively limited period of time'. Masten *et al.* (1991) and Lohtia *et al.* (1994) use shipbuilding as an example to explain temporal specificity. If all activities necessary for completion of a ship have been coordinated, failure to achieve timely delivery of one item for the ship could be costly to the ship manufacturer. Although an alternative supplier of the part might exist, if this results in a delay of the manufacture of the ship, temporal specificity is said to exist. In this scenario the ship builder is exposed to the possibility of "strategic hold-ups".

7. **Procedural asset specificity** refers to organizational business process, routine and workflows, De Vita *et al.* (2011). This dimension of asset specificity can be particularly found in service industry. The transactional relationship will be high when buyers heavily rely on suppliers who customize their work process to a particular buyer's business process. It is difficult to replace once created or to redeploy without value reduction.

These seven dimensions of asset specificity form distinct and interrelated, rather than substituted and isolated, dimensions of the construct. The interconnection of the asset specificity dimensions indicates that simply investigating one dimension of the construct may be inadequate. For example, physical, procedural and site specificity involve the allocation of staff with specialist knowledge and skills or specially trained personnel to perform the activity (human asset specificity), Lamminmaki (2005). Site specificity may be highly correlated to temporal asset specificity to ensure smooth and zero downtime delivery of services, which enables the brand asset specificity in service industries where just-in-time delivery is a core activity of

business operations. Similarly, temporal specificity may require the supplier and/or the buyer to assign specialized staff (human asset specificity) and customize existing operating process (procedural asset specificity) to meet the needs and requirements of the transactional relationship.

VALUE ADDED BY FM IN RELATION TO ASSET SPECIFICITY

In organizations where FM is considered as non-core business the principle reason for FM existing as an entity in its host organization is to support its organizational primary activities operating more effectively and efficiently. The supportive role of FM can be defined as a key function in managing facilities resources, support services and the working environment, supporting the core business of the organization in both the long and short term (Chotipanich, 2004, Tay and Oui, 2001). In order to deliver facilities services or facilities products which are an essential support and/or add value to the client organization FM needs to align the organization's primary processes with facilities processes, CEN (2010). It has been widely agreed among FM researchers (Grimshaw, 1999, Then, 2003, Yiu, 2008) that to align FM processes closely with its core business's process FM organizations have to be involved in a strategic decision making process and to be seen and embedded in a corporate board. Generally an identity of FM is perceived among clients, customers and end-users as a back office performing day-to-day basic functions such as cleaning, security, catering and office administrations in its host organization. This confines FM's role and functions at an operational level, FM hardly involves in decision processes at the strategic level. Most service level agreements (SLA) between FM performances and its client's requirements are a one way communication within top-down approach.

Adapting from Williamson (1981) this paper conceptualizes asset specificity from FM performances and activities that add value to the core business and surroundings as FM related specialized abilities. The nature of the transactions between FM organization as a supply side with its client as a demand side can be explained to some extent by asset specificity which describes the extent to which a given FM product or services are tailored to specific needs and requirements based on their "*specialized abilities*" for instance, nature of customer type, the core business, primary activities, business needs and requirements. Organizations where FM performances and services significantly influence the operation of primary activities and overall business performance and outcomes, require higher engagement and collaboration from FM organizations than FM organizations that provide the day-to-day basis.

This paper proposes that the degree of specificity of FM products and services in the transactional relationship can also be implied as the degree of value added undertaking by FM organization to its host organization including clients, end users and surroundings. The added value perceived by its host organization will mainly justify and outline a structure of FM's scope, role and function in the given organizations. FM is characterized by varying degrees of asset specificity depending on the complexity and customization of the FM products offering for instance workplace solutions, service delivering, managerial skill sets, labor and workforce. The impacts of added value delivering by FM organizations can vary from individual activity into the entire organizational portfolios. The following presents the seven types of asset

specificity from FM related specialized abilities that add value to the core business and surroundings from FM performances and activities.

1. **Human asset specificity** represents specialized know-how or experience specific to particular FM organizations and their clients. It proceeds from both the prior work experience and emerging knowhow from performing a current job. It has limited relevance to other task situations and organizations. When organizations employ a total facilities management (TFM) solution, clients depend on FM managerial skills and workforces for their support services. Technological organizations such as hospital, hotel, and laboratory demand particular FM knowledge and activities that comply with their work practices and corporate cultures. Organizations that need the skillful and trusted FM workers who conduct FM services and activities such as cleaning and security. For this type of asset specificity, clients acquire the higher level of commitments from FM organizations and long term investment on labor workforces. Organizations can develop and nurture knowledge dissemination within FM organizations and their clients by increasing the communication channels between both parties for instance, engaging FM organization during strategic decision process and balancing information asymmetry between the demand and supply side.
2. **Site asset specificity** refers to the added value by reducing the commuting distance between the demand side and supply side. A demand side includes clients, customers and end users. A supply side encompasses FM organization both in-house and service providers and also sources of facilities such as physical and virtual workplace and facility service. The proximity between both sides creates the cost advantage such as the reduction of the redundant information processes, transaction cost and real estate cost. For example, the concept of FM shared service that consolidates the redundancy of FM services and work places across the multiple organizations and locations into one central location.
3. **Physical asset specificity** can be seen in organizations that highly customize infrastructure, workspace and FM services. FM organizations play a critical role to its client's core business because this bespoke facility services and infrastructure influence the critical impacts to the organizational performance and business outcome such as increasing customer satisfaction, employee productivity and organization's revenue. For example, shopping areas in the airport and the retail outlets that attempt to arouse the unarticulated shopper's needs by using disoriented space layout that navigates shoppers into the bottom neck area. This aims to nurture unnerved shopping experiences by relaxing shopping environment so that shoppers could not notify whether it is day or night from covered windows. FM organizations highly involve in strategic planning decision with their senior management such as the decision making process, service specification.
4. **Dedicated asset specificity** is contrary to physical asset specificity that FM organizations offer the standardized FM services and provision. Organizations can benefit from dedicated asset specificity by using economies of scope and scale. Economies of scale are offered by large investments in capacity (e.g. business park developments) which, although they are not bespoke, present problems in finding another buyer who wants to use the spare capacity, (Finch, 1996). Economies of scope are offered by

FM operations and managements that encompass an entire FM supply chain, for instance the concept of TFM.

5. **Brand asset specificity** refers to FM practices that support the corporate culture, enhance the corporate reputation and help organizations to attract and retain the potential talent employees. This brand asset specificity is correspondent with a current organizational strategy that increases the organizational capacity and capability. For example, one of the marketing strategies that technological firm such as Google and Facebook exploit to brand themselves as an innovative organization is their playful workplace and related facility designs. Or organizations that advert themselves as the environmentally conscious companies by following green building practices and certified such as LEED and BREEAM. The implementation of this asset specificity tends to be a one-off decision making from clients which impacts in the short run. In order to sustain the impacts, FM organizations needs to constantly collaborate and communicate with other business units such as HR and marketing.
6. **Temporal asset specificity** refers to added values created from time-sensitive FM applicability. It can be practiced in FM services and provision by just in time inventory practice that helps corporation avoiding and minimizing the cost of inventory holding. Another example is organizations that can gain the time zone advantage, besides of cost advantage by outsourcing FM tasks to service providers from different time zones that can benefit from round-the-clock business operations. This asset specificity also can be seen in flexible buildings and workplace services that can be easily adapted for a change of time.
7. **Procedural asset specificity** can be practiced in the organization whereas FM processes and practices integrate with their client's work process. The FM working process also needs to comply with the client's corporate culture and work practices. Clients and end users demand the minimized rate of FM operation downtime because FM services and activities ensure the success of business operations and outcomes. For example, the hygiene in a hospital and/ or a laboratory is the critical factor to success operation outcome than in other business sectors such as cleanliness in the general offices. FM organizations closely engage in the client's decision making processes in order to synchronize both demand and supply working processes.

From a transactional relationship theory there is a risk of opportunistic behavior occurring from FM service providers with their clients who heavily rely on FM contributions. In other words it is vulnerable to opportunistic behavior by the other if the issue of asset specificity is not considered, (Finch, 1996). For example, the hold-up problem will arise when organizations employ the incumbent operators of the facility who undergo a considerable learning curve during the duration of a project (Finch, 1996). If clients do not have or prepare for the appropriate exit strategy, the switching cost would be overly high to renew the contracts with the existing service providers who hold and control the asset specificity upon clients. An understanding of the extent and nature of asset specificity is critical to the formulation of an appropriate contracting format in FM (Finch, 1996). Finch observes that the greater degree of specificity, the more important it is to establish ex-ante and ex-post protection against opportunistic behavior by one of the parties. It aims to prevent hold up situations with the incumbent vendors and overly high switching cost when

clients want to renew the contract with the existing service providers who possess and control the high FM asset specificity to the organization.

EXEMPLARY CASES

These seven case studies exemplify the applicability of asset specificity relating to FM. The empirical data collection was carried out by semi-structured interviewing with key stakeholders of targeted organizations such as in-house facilities managers, service providers, clients, business unit managers and end users. The duration is approximately 1-1.5 hours per interview. The case selection criterion was maximum variation from public, private and state-owned sectors that aims to demonstrate various types of a notion of asset specificity in an FM setting.

1. LEGO

LEGO is a Danish construction toys manufacturer. The FM organization makes an effort to embed its process into LEGO's primary activity. This aims to ensure the operation of LEGO's manufacturing process runs smoothly with the lowest rate of operation downtime (procedural asset specificity). A FM organization (LEGO Service Center) also wants to deliver its FM services and provisions in time according to its clients, customers and end users need with the least costs of inventory holding (temporal asset specificity). Most of the FM services and activities are performed by in house workforces and only a catering service is outsourced to a third party service provider (ISS) that is treated as LEGO's internal staff because LEGO wants its FM operation and performance complying with the LEGO corporate culture (human asset specificity).

2. Mærsk

Mærsk's core businesses are logistics, container shipping and tower container. The FM processes and activities are not important for Mærsk's working processes. The occasional downtime of the FM operation would not dramatically lead to negative impacts on Mærsk's core business. Mærsk then requires the basic FM products and services that support the operation of the primary activities without discontinuing (dedicated asset specificity). The expected output and outcome from FM service vendors are not perceived significantly different from each FM service vendor. Total FM (TFM) is employed in Mærsk sourcing arrangement by contracting out FM services and provisions to a single FM provider (Johnson Controls Inc. (JCI)) that possesses the managerial capacity and capability globally. .

3. Hong Kong science and technology parks (HKSTP)

HKSTP is a state-owned organization that mainly provides workplace and laboratory facility for technology-oriented start-up companies and multinational corporations. This project aims to provide world class technology support and laboratory service within dynamic environment that enables start-up companies to nurture ideas and innovation development (brand asset specificity). In the HKSTP office campus there are approximately 10,000 end users and 400 tenants sharing the central infrastructure and FM services such as parking area, canteen, reception area, security service, gardening and outdoor space (site asset specificity).

The FM processes are embedded with the tenant's activities because technology-savvy tenants demand the most reliable FM services and provisions to ensure their operations and activities (procedural asset specificity). In order to manage and organize the world class facility hub an FM organization in collaboration with a service provider (ISS) initiated a facilities manager trainee program that aims to develop and cultivate the role model of the FM practitioners who have the appropriate FM knowledge ranging from technical skill to managerial skill (human asset specificity).

4. Thai central government

Thai central government initiated the new office campus project where each public department from different locations shares the common area and facility service involved in order to minimize the redundancy of workplace and facility services among its public departments (site asset specificity). The FM organization from the central government provides the basic facility service such as security, cleaning service, reception, gardening, parking area (dedicated asset specificity).

5. Dutch central government

The Dutch central government commences the organizational merger and consolidation in order to reduce the operating costs, leverage the working standard and standardize practice. As a result FM as a support function from each public department is amalgamated into one single department and reports directly to the central department. FM organization is perceived as a cost center providing the stripped down FM services and provisions to new merged organization (dedicate asset specificity). The scope of works covers space acquisition, facilities management and asset management for all public departments.

6. PTT Public Company Limited (PTT)

PTT is a Thai state-owned energy company. Previously subsidiary companies of PTT's host organization rented office spaces separately around Bangkok and contracted out FM services individually. In order to consolidate the redundancy of workplace and facility services among its subsidiary companies and to reduce the FM operating costs (site asset specificity). ENCO is established as a semi-autonomous company which is responsible for managing FM services and provisions for the new office campus. At an initial phase of organization establishment there is a shortage of FM knowledge, expertise and workforces, ENCO heavily relies on the FM professional skills from its service provider; CBRE (human asset specificity). The office campus is intended to be the multi-tenants office for subsidiary companies by sharing the common area such as reception, parking area, canteen, including common FM services for example, security, cleaning, catering (dedicate asset specificity).

Centralizing this business sector into a single location will enhance the effectiveness and the efficiency of all the communications. This complex will be represented as a hub of all the energy businesses in Thailand. ENCO has been described as Thailand's first truly energy efficient property development and was designed under the LEED system (brand asset specificity). ENCO provides FM service only for the common areas but excluding each tenant workplace because each of them has a wide-range of FM requirements and

specifications. They preferably manage their own space and services. ENCO is perceived as the profit center by charging rental and FM service fees from its tenants at the markets price.

7. PTTEP (PTT Exploration and Production)

PTTEP is a subsidiary of PTT operating oil exploration and production which is a core business of PTT. PTTEP's headquarter office shares common areas such as main reception, parking lot, main elevator and catering with other PTT subsidiary companies. PTTEP manages its own facilities service and provision by contracting out to third party providers such as reception, security, concierge services, security guard, cleaning, documents and mail services. However, at PTTEP information security is the top priority issue covering, physical, data and information aspects. PTTEP's primary activities require trusted and skilled FM workers - especially blue collar workers. Thus FM blue collar workers are also considered as a part of PTTEP's day-to-day operations because they are allowed to access all areas equivalent with knowledge PTTEP employees. However, the challenge is a high rate of FM staff turnover occurring because the FM blue collar job is only routine job tasks, low pay and fringe benefits and an unstable position. In order to decrease the churn rate of FM employees and a need to attract and retain trusted and skilled workers and increase employee loyalty the FM department initiated the collaboration with PTT's HR and service providers to increase the fringe benefits above average for FM blue collar workers (human asset specificity). In cases of contractor termination and vendor switching PTTEP still hires the incumbent FM staff but selects the new service providers to supervise them on a regular basis. With this HR policy PTTEP can retain the trusted and skilled FM blue collar workers with greater employees' loyalty. It also increases the PTT reputation as one of the most attractive workplaces in Thailand (brand asset specificity).

The exemplary cases present that added value from one FM activity encapsulating more than one type of FM related asset specificities. For example, an open plan approach in PTTEP consists of physical asset specificity, human asset specificity, and brand asset specificity. Similarly, TFM consists of dedicated asset specificity and human asset specificity.

DISCUSSION

One of the asset specificity theory's implications in general management research is to explain the rationales and actions behind the strategic decision making on **whether**, **what**, and **why or why not** outsource organizational support functions such as finance consultancy, HR services and ICT solutions. But there is a lack of discussion and research using this theory in FM. In order to compliment the body of existing FM knowledge this research thus intends to match its applicability with findings from empirical studies to explain the logic behind these strategic dilemmas.

Chotipanich (2004) pinpoints two main basic factors that impact the choices of facilities needs in the organizational decision making process: First, *internal factors*, such as organizational characteristics, facilities features and business sector and second, *external factors*, such as economic, social, environment, legislation and regulation, FM market context and local culture and context. These factors define

characteristics of decision making behavior and primary stakeholders who are involved in the decision making process. Asset specificity theory added another external determinant factor that justifies FM 's scope, role and function in the given organization: *FM related specialized abilities*. It is considered as the above the line contribution and offering from FM organizations. It can be connoted as the value added from FM provisions and services to the organization's core business. This paper formulates the **four value adding positions** and their associated characteristics of FM related specialized abilities that add and/ or create value to the core business and surroundings. Each type of FM related specialized abilities have a particular characteristic of collaborative relationships between FM organizations and their stakeholders. In order to deliver the right specialized abilities to the demand side this paper argues that each type of collaborative relationship requires different groups of primary stakeholder as follows:

1. FM related specialized abilities that **support the operation of the organizational primary activities** running effectively and efficiently with the cost advantage. This type of FM related specialized ability is relevant to **dedicated asset specificity** that corporations could benefit from achieving economies of scope and/ or scale. FM organizations need to collaborate with a **senior management** of the given organization. It is the conventional spot- market relationship with the cost-sensitive contractual agreement. The involvement of the FM organization is only at the operational level. FM services and provisions are required as a commodity, which has no significant difference among different FM providers.
2. FM related specialized abilities that **enable the organizational capacity and capability** with the specific organization's demands. FM organizations and their demand side establish one-off decisions and implementations responding to current organizational demands in close collaboration with one or more business unit directors such as marketing, HR, production, R&D and finance. FM organizations offer cutting-edge practices, performance framework, processes and managerial expertise that enable organizational productivity, business profitability, operational efficiency and effectiveness and also end user satisfaction. This type of FM related specialized abilities encapsulate three asset specificities: **brand, site and temporal asset specificity**. FM organizations need to collaborate with **one or more of the business unit directors and senior management** of the given organization. FM providers and their host organizations mutually share economic risk and benefit. However, cost reduction still plays a key role in the decision making process. The FM organizations engage at the operational and tactical levels in order to align FM working processes with the client organization's primary activities.
3. FM related specialized abilities that **ensure the operation and performance continuity of primary activities** continuing to operate normally and without interruption. FM organizations offer FM service and provisions focusing on operational reliability and minimizing the operation downtime. Corporations rely on FM knowledge, workforce, skill and expertise that comply with organizational business processes. This type of FM related specialized abilities covers two asset specificities: **procedural and human asset specific**. FM organizations highly collaborate and engage with a board of other business unit director particularly production in order to deliver the right FM services with their needs and expectations. FM organizations need to collaborate with **a board of business unit directors** of the given organization.

The FM organizations and their host organizations share mutual risk, benefit, trust and commitment relationship. FM organizations and their client's relations move from spot market-driven relationship towards becoming the preferred partners. FM working processes are incorporated/ embedded into the organizations' primary activities and the client's core business. The degree of knowledge sharing between FM organizations and their clients is high. Facilities managers play a key role from tactical to strategic levels.

4. FM related specialized abilities that **enhance to operational performance and business outcome** of the core business. FM performances immediately and directly impact the end user's perceptions and satisfactions, their specifications are highly customized by end user's requirements in order to enhance end user's satisfaction and increase organizational productivities. Any downtimes will immediately impacts on the organizational operation and outcomes. An FM organization co-creates and customizes the FM services and provision specification with all relevant stakeholders involving from client, business units, and end users. This type of FM related specialized ability is relevant to **physical asset specificity** that highly customizes infrastructure, workspace and FM services to FM's stakeholders. FM organizations collaborate with **end users** of the given organization. The roles and responsibilities of FM shift away from supportive roles to becoming an organizational core function. The scope of FM activities is not only meeting the client's needs but also meeting the end user's needs. The FM organization and its host organization share mutual risk, trust, benefit and commitment including the organizational bottom line. The facilities manager can engage in the client's organization's decision making process. At a strategic level, FM and client jointly create shared innovation and value.

Table 1 below summarizes seven FM related asset specificities that create 4 types of value adding position and primary stakeholders involved.

Table1: the relation of asset specificity and value adding

FM-related asset specificity	Value adding position	Primary stakeholder
Dedicated asset specificity	To support the operation of the organizational primary activities	Senior management
Brand asset specificity	To enable the organizational capacity and capability	One or more of business unit directors and senior management
Site asset specificity		
Temporal asset specificity		
Procedural asset specificity	To ensure the operation and performance continuity of primary activities	Board of business unit directors
Human asset specificity		

Physical asset specificity	To enhance to operational performance and business outcome	End users
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FM related specialized abilities involved with procedural, human and physical asset specificities should be kept in-house unless corporations need to find the most optimal way to fulfill the needs from the demand side with FM related specialized abilities from external suppliers. Considered as non-core business and non-core competency, seemingly corporations tend to outsource and out-task FM provision and services to the external service providers who hold particular skill and expertise. Arguing that each type of value added requires different managerial approaches. FM activities that provide the dedicated asset specificity with the cost advantage may not need to engage in strategic decision as much as physical asset specificity that enhances organizational performances and outcomes. Given types of FM related asset specificities associate with the particular collaborative relationships with FM's primary stakeholders for example when the corporate decision on provision arrangement by using total FM (dedicate asset specificity), partially in house or outsource in order to benefit from cost advantage is mainly made by senior management. Other stakeholder groups including FM organizations tend to be excluded from the decision making process.

Optimizing the appropriate collaboration between the FM organization and its primary stakeholders is the key success factors for delivering value added service and provisions. Mismatching will dilute the value adding by increasing the FM operating and transaction costs and overlooking the business opportunities. For example, **Mærsk** benefits from economies of scope and scale by having a standard global contract with one single service provider. In contrast, in an organization such as **LEGO** that its operation and production of primary activities strictly relies on the reliability and stability of FM services and provision. Another example, the retaining and attracting employee strategy of **PTTEP** exhibits the involvement of a group stakeholder from HR, FM in-house organization and external service providers in the decision making process (human asset specificity). PTTEP initiates the new way of sourcing arrangement by collaborating with external service providers to use the incumbent FM staff that solves the shortage of skilled and trusted employee problems. Similarly, **LEGO** service center frequently interacts with each LEGO's business units and production facility to improve and ensure its FM service delivering (procedural asset specificity). LEGO decides to keep most of its FM activities in house in order to deliver FM services that comply with and embrace LEGO's corporate culture and work requirements. Unlike, **HKSTP** is also an organization where the end users' demands for the high level of service reliability. However FM services and provision of HKSTP are contracted out to one single service provider (ISS) because of cost advantage and the shortage of FM knowhow. HKSTP aligns the internal needs and expectations from end users with external knowhow from an external vendor by establishing the internal facilities managers that are capable of liaison with both entities. For the larger scope of managing and communicating demand and supply **PTT** set up the semi – autonomous organization to supervise the performance and contractual agreement with FM service providers in lieu of total outsourcing.

CONCLUSION

The central idea from asset specificity “*FM-specialized abilities that create added value to an organizational core business*”, formulates a boundary and particular characteristics of FM organizations which is the starting point for FM academia and practitioners to explore and demystify their professional identities. From the supply side FM organizations can use the proposed FM specialized abilities for developing their capacity, capability, competency and resource to supply core business’s needs and requirements. From the demand side clients can use the proposed value adding positions to define and manipulate the role of FM organizations in relation to FM contributions. These understandings can also be used to create a constructive dialogue between both demand and supply sides in order to converge and align FM’s offerings with core business’s expectations. For further development the larger size and variation of empirical data need to be investigated in order to testify and validate this explorative paper.

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Mapping value added positions in facilities management by using a product-process matrix

Abstract

Purpose: The purpose of this exploratory research paper is to present a product-process matrix that assists FM organizations and their stakeholders to map their value added position in their organizations. Using this matrix, FM practitioners are able to assess the existing value added delivering, how it is formulated and identifies actions for improvement.

Design/ methodology/ approach: The paper develops the FM value added product - process matrix to allow comparisons between different FM products with their FM processes and illustrates their degree of value delivery. The building blocks of the matrix are an FM product structure and an FM process structure. The supporting empirical data were collected through semi-structured interviews from selected FM organizations supplemented by relevant documents.

Findings: Based on a product - process matrix, a typology of FM value added positions is introduced namely *support*, *enable*, *ensure* and *enhance*. Each position has merits and requirements under specific circumstances for its client's core business. Matching a given type of FM value added position with the appropriate FM product and process under the specific conditions is likely to create greater values to the client's core business. Meanwhile, misaligning dilutes the value delivery.

Research implications/ limitations: This normative matrix can be used as a decision- making tool for a client to assess its FM performances and activities, and to determine the needs of FM provision and services. On the other hand, an FM organization can use it as a self-evaluation tool for evaluating its FM service/ provision performances and aligning its offering with core business needs. However, the matrix needs to be validated and verified from various types of organizations.

Originality/ value: This paper presents a typology of FM value added position and substantiates its applicability with empirical evidences. Although a proposed typology is formulated in a context of FM, its applications can be applied into other organizational support functions, for instance human resource (HR), information technology (IT) and finance services.

Keywords: Strategic planning, Added value, FM, Mapping, Positioning

Paper type: Research paper

INTRODUCTION

The main reason why facilities management (FM) exists as an entity in its host organization is to support the primary activities operating more effectively. The role and identity of an FM organization is perceived among clients, customers and end-users at an operational level in their respective organizations (Grimshaw, 1999). In order to deliver better FM services and solutions, many FM researchers (Grimshaw, 1999, Then, 2003, Yiu, 2008) suggest that FM organizations have to be involved in their strategic decision process and to be seen and embedded in at the corporate board level. The supportive role of FM can be defined as a key function in managing facilities resources, support services and the working environment, supporting the core business of the organization in both the long and short term (Chotipanich, 2004, Tay and Oui, 2001). Some FM researchers even assert that FM has to be core business itself (Waheed and Fernie, 2009, Yiu, 2008) with its own corporate authorities. In fact, participating in the corporation's strategic processes is neither FM's discretion nor FM's claims. Chotipanich (2004) 's research shows that the processes of organizational decision-makings on the needs of facilities are inherently influenced by two main factors: (1) Internal factors, such as organizational characteristics, facilities features and business sector and (2) External factors, such as economic, social, environment, legislation and regulation, FM market context, and local culture and context.

Historically, there has always been a tension between two common corporate management drivers: Cost reduction and value adding. It has been widely discussed in strategic management literature that the contribution of support functions such as human resource (HR), information technology (IT) or FM is primarily cost reduction. Cost reduction is one way of value adding but FM organization and operations are unfairly branded from senior managements as cost center and their only monetary value contribution is cost reduction. Arguably, FM organizations can contribute value to its organization more than just reducing cost of operation and provision. In order to deliver the value added FM services to the core business, the FM organization must align FM services and solutions with core business needs and requirements (CEN, 2010). The aim of this paper is thus to develop a normative FM value added position matrix that illustrates FM value position which is the relative value delivering position from the FM organization to its stakeholders. This decision making tool can be used to assess the existing FM value position choice and project for the next desirable value position. It can be used to reframe the dialogue between stakeholders and facilities managers both from the internal FM organization and to service providers.

RESEARCH BACKGROUND

The development of a product- process matrix requires the conceptualization of its two building blocks: (a) The value added product structure - a classification scheme of product categories and (b) the value added process structure- a classification scheme of the value added process stage. Such a typology allows the FM organization to analyze its current value delivering position and projects the proposed added-value delivering position. FM organizations and their activities are presented systematically to allow for comparisons not only

of the positioning of facilities services but also of the restructuring of services within, and reallocation between different types of facilities services.

This paper outlines a tool for senior managements as a representative of the demand side and facilities managers as a representative of the supply side, to consider the role of the given FM activities in their organizations and the associated responsibilities that the FM role and responsibilities will be built around:

- *To support* the operation of an organization's primary activities with the cost advantage or
- *To enable* the organizational capacity and capability with the current organization strategy or
- *To ensure* the operation and performance of an organization's primary activities or
- *To enhance* the productivity of an organization such as business outcome and revenue

The empirical data included interviews from six case studies as the primary source, and the paper also makes reference to cases from secondary sources to illustrate the different value positions that each organization may be appropriate, based on matching criteria.

The following aims to delineate terms used in this paper's context:

- Stakeholders refer to a group of FM stakeholders within an organization: Client, customer, and end user.
- Client is the senior management at the strategic level who represents the rest of the stakeholders.
- Customer is the representative of each business unit at the tactical level such as production, R&D, finance, marketing, human resource, information technology and operation.
- End user is anyone who directly perceives and utilizes FM services and provision.
- FM organization refers to both internal FM organization and FM service provider. It is an umbrella term using the classification of Williams (1996) encapsulating the following categories:
 1. Total in-house FM organization;
 2. Outsourcing as "single", "bundled" or "packaged" contractors;
 3. Total facilities outsourcing: Management contractors;
 4. Total facilities outsourcing: Managing agent.

This paper proposes that the degree of value delivery by FM organizations is based on the FM product offering matching the type of FM processes between FM organizations with their clients.

- FM product (What does FM offer?): The overall perceived FM related contributions from stakeholders. It is the question of what FM organizations offer to their stakeholders.
- FM process (How are FM products offered and perceived?): The collaborative relationship between FM organizations and their stakeholders. It is the question of interaction on how FM organizations offer FM products to their stakeholders and how stakeholders perceive and interact with FM product offering.

The structure of this paper is divided into two main parts: The first part develops the two building blocks of FM product-process matrix. A framework is then built to guide managers in the decision regarding the best possible way to undertake FM provision and services. In the second part implications and limitations of this framework and the applicability and limitation for further research are discussed. The practical implications of the product-process matrix are exemplified through six FM organizations with their host organizations.

FM PRODUCT

FM product is conceptualized as individual and/ or bundles and/ or portfolio of FM related contribution that support and accommodate the primary activity of the organization and its properties. It can be FM provisions (software) and materials (hardware) for instance services, physical assets, performance, managerial knowledge, technical knowhow, tools, and consumables. The scope of FM product encapsulates not only building operation and maintenance but it also includes workplace, facilities, support services, property, corporate real estate and infrastructure. The concept of FM products have been discussed and classified by many authors as shown in table1:

Varcoe (1993) groups a FM product into three categories based on its capacity and capability of suppliers who offer/ provide related FM products. First, the comprehensive one-stop solutions, offering both the management and all of operational FM products from total FM supplier. Second, the management expertise and FM related know-how from FM companies who supply FM related products. And third, the specialist FM product from service suppliers who offer particular operational services.

Nutt (2004) categorizes FM products into four generic types of primary resource management central to the FM function: The management of financial resources, physical resources, human resources and the resources of information and knowledge. Nutt (2004) also identifies FM product from its impacts related to time frame duration: The “short-short” time focus of the support services sector, the “short-medium” time horizons of business, the “medium-long” time frames of the property market and the “long-long” time scales of environmental concerns.

Chotipanich (2004) classifies a generic scope of an FM product by its functionality encapsulating eight clusters: (1) Real estate and property development, (2) facilities project management, (3) maintenance and repairs, (4) building services and operations, (5) office services, planning programming, (6) space planning, (7) operations administration/ management and (8) employee supports and services.

Table 1 shows FM products from different classification criterion

Author	Classification criterion	FM product
Varcoe (1993)	Capacity and capability of FM provider	Management expertise Operational services Both management expertise and operational services
Nutt (2004)	Time frame duration	"Short-short" time focus of the support services sector "Short-medium" time horizons of business "Medium-long" time frames of the property market "Long-long" time scales of environmental concern
Chotipanich (2004)	Functionality	Real estate and property development Facilities project management Maintenance and repairs Building services and operations Office services, planning programming Space planning Operations administration/ management Employee supports and services
Kaya and Alexander (2005)	Output perceived	Benefits to core business recognized by FM main board director Viewed as property issue by property manager/ director Viewed as people issue by HR director Viewed as operational issue by operational director Viewed as hard cost issue by financial director

Kaya and Alexander (2005) distinguish FM products from the output perceived by five different customers' views from its host organization: (1) Benefits to core business recognized by FM main board director, (2) viewed as property issue by property manager/ director, (3) viewed as people issue by HR director (4) viewed as operational issue by operational director and (5) viewed as hard cost issue by financial director.

Based on the above views the FM product structure differentiates product offering on a continuum of FM products. The key factors in an FM product can be categorized into two groups:

- (1) Input of FM products including capacity and capability of suppliers, primary resource, and application
- (2) Output of FM products including outcome from FM product, impact from time frame perspective

This paper differentiates between FM product stages according to the degree of the customization and complexity based on FM literature, (Chotipanich, 2004) and CEN, 2010)) and adapted from the literature on

service research (Tinnilä and Vepsäläinen, 1995), Schmenner, 2004). Each of them has specific characteristics as follows:

1. **No-frills** is the commoditized FM product with standardization of offering and few options in terms of product delivery. It is a staple contribution for supporting organizational primary activities. It carries out the day-to-day basis operation creating the short-term impact to its host organization. The operation downtime does not directly influence the productivity and effectiveness of organizational primary activities. End users explicitly perceive and comment on the quality and effectiveness of this FM product rather than other types of FM products. Examples include cleaning and housekeeping, catering, reception and maintenance and repair of mechanical plants.
2. **Ad-hoc** delivers the extended numbers of FM product options with more complex specifications than no-frills. The main objective of ad hoc is to respond to the current organization strategy and to initiate the organization capability and capacity. It focuses on short-medium impacts to its host organization. The output of this product is primarily reviewed by customers who procure service level agreement (SLA) or key performance indicator (KPI). A current example is the implementation of the environmental certificate that attempts to decrease the social pressure on an environmental impact of FM products and to increase the brand awareness of the corporation in terms of public good.
3. **Nail-down** offers the more customized FM products that highly engage with the operation of host organization's primary activities. It contributes the medium-long impact to its host organization. FM aims to ensure the efficient and effective operation of primary activity by providing lowest FM operation downtime. The downtime of an FM operation influences a primary activity and business outcome. Because of its more tailor-made product and longer-range effect, it requires an FM provider to be involved in strategic planning and decision making processes with its clients and business unit directors. Examples include hygiene practices in hospital and laboratory, leasing and sub-letting review, facilities planning/master planning, real estate and property portfolio strategy, acquisition and disposal of sites and buildings, and leasing negotiation and management.
4. **Bespoke** is closely associated with or even embedded in the organization's primary activities. It contributes to the long-term impact and affects the whole organization's bottom line perceived by clients and top management teams directly. Facilities managers are closely engaged in an organization's strategic planning process. FM organization and its host organization share the mutually agreed goal, for instance benefit and risk sharing. Examples include retail outlets and space renting, community affairs and public relation, long term resource planning and strategic development planning.

Figure 1: Four continuums of FM products

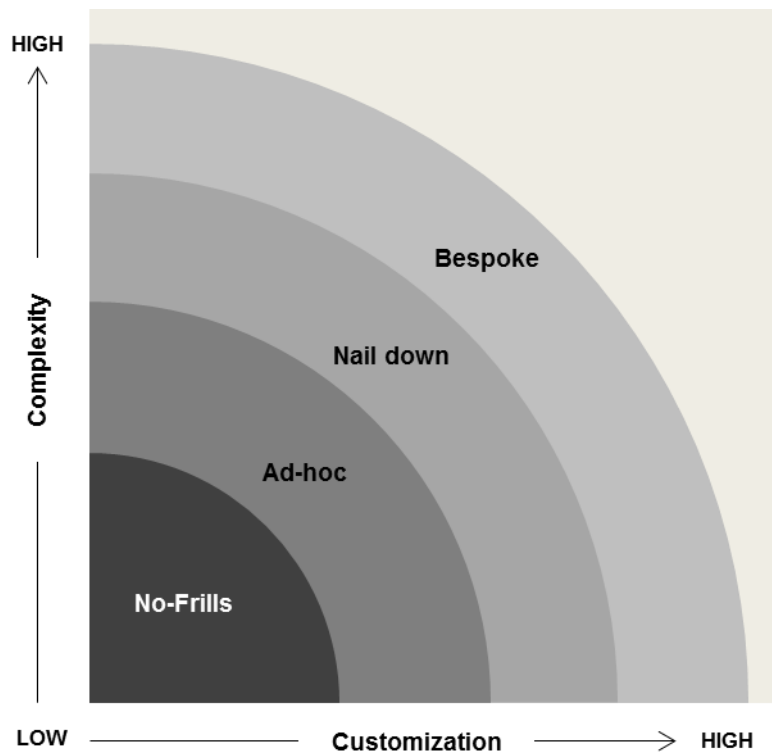


Table 2 shows the FM product structure and relates the four stages continuum of the FM product structure from lowest to highest degree of customization and complexity of contingent involved. There are five key characteristic attributes of FM value added product as following

1. *Key objective*: How is the FM product defined/ perceived from client, customer and end users? How comprehensive is the range of existing FM products?
2. *Strategic intent*: What is the purpose of the FM products in the organization? What does core business tend to achieve through FM activities?
3. *Performance metric*: How will the FM products be evaluated? What success criteria of FM performance would be justified?
4. *Core-periphery*: The relevance between FM product and an organization's primary activity. The closeness is high when the FM product is closely related to the firm's core business activity and low when it is unrelated to the core business.
5. *Primary stakeholder*: Stakeholders who directly interact and perceive the outcome of the FM product and influence the choices of FM product specifications.

Table 2: Characteristic attributes of the FM product

Characteristic attributes	FM product			
	No -frills	Ad-hoc	Nail-down	Bespoke
Key objective	To support the primary activities at the lowest cost	To enable the current organization strategy	To ensure organizational productivities by embracing with organizational primary activities	To enhance to the triple bottom lines
Strategic intent	Meet the basic needs	Fulfill the specific needs	Exceed the basic needs/ Best in class	Discover the un-articulated needs
Performance metric	SLA, KPI	Capability creation	Satisfaction	Triple bottom lines
Core- periphery	Almost irrelevant to an organization's primary activity	Compatible with current organization strategy	Involves in organization primary activities	Embed in organization's primary activities
Primary stakeholder	Senior management (CFO)	One or more of business unit directors	Board of business unit directors (HR, operational, financial, R&D)	End users

For an individual organization it may employ different types of FM products. Although there are several types of collective FM products in one organization, it is argued that there is only one FM product position perceived by the stakeholders. This is based on the nature of the core business, corporate culture, the primary activity's operation and organizational strategy. FM organizations need to develop and match the appropriate way to deliver chosen FM products to their stakeholders. The following section will elaborate four types of appropriate ways (i.e. the FM process) to deliver FM products.

FM PROCESS

The FM process is an act of effort from the FM organization to deliver its FM products to its stakeholders. This is the collaborative relationship between FM organizations with its demand side which focuses on how FM organizations offer FM products to its clients? And how do clients perceive FM product offering? The success of a collaborative relationship leads to the success of value delivering to the stakeholders (Lehtonen, 2006). The characteristics of a successful collaborative relationship consist of trust, the length of commitment and the willingness to coordinate activities (Mohr and Spekman, 1991). The discussions of the

conceptualization of FM processes have been discussed and classified by many FM authors as shown in Table 3.

Burstow (1994) categorizes FM processes into two types based on the type of FM role: FM as a contractor, which provides the commoditized services, justified by activity rather than performance and FM as a business partner which provides the added value services and offers a wide range of service.

Barret (2000) classifies the hierarchy of the FM process into five vertical levels based on levels of innovation through the supply chain. Starting from non-core FM functions (level 1) to a strategic level (level 5), he suggests that at level 5 there is a high probability of creating value. The innovation network at level 5 represents the strategically collaborative efforts with FM suppliers; a concerted and sustained effort needs to be performed in order to build strong and creative relationships.

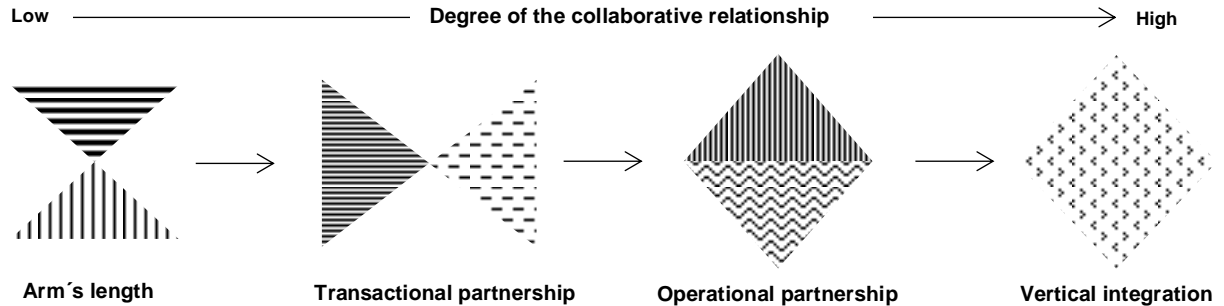
Lehtonen (2006) categorized FM processes into three categories between an FM organization and its client based on the duration of relationship. First, arm's length contract is the short-term relationship focusing on operational level. The contractual agreement is focused on price. There are no mutual goals and activities between the FM organization and its client. Second, operational partnering is the medium-term relationship focusing on uncertain reduction and quality improvements while the level of strategic involvement is not so significant. Third, strategic partnering is the long-term inter-organizational relationship, usually spanning a period of three to five years, exceeding the duration for operational partnering. There are mutually agreed goals and activities between the FM organization and its client. Table 3 summarizes the FM processes in relation to the different classification criterion.

Table 3: FM process and classification criterion

Author	Classification criterion	FM process
Burstow (1994)	Role of FM organization	FM as a contractor who provides the commoditized service FM as a business partner who provides the added value service
Barret (2000)	Levels of innovation through the supply chain	Information transfer Knowledge exchange Knowledge collaboration Innovation chain Innovation network
Lehtonen (2006)	Length of relationship between FM organization and its client	Short-term focusing on operational level Medium-term focusing on uncertain reduction and quality improvements Long-term focusing on mutually agreed goal and activity

Figure 2 presents the FM process structure categorized according to the degree of collaborative relationship between the FM organization and its stakeholders.

Figure2: An array of the FM process structure



Based on the above views the FM process structure can be related to a continuum of levels of information, knowledge and innovation sharing and mutual involvement. This paper classifies four types of FM process stages according to the degree of collaborative relationship between FM organizations and their stakeholders. Each of the FM processes has specific characteristics as follows:

1. **Arm's length** is the conventional spot- market relationship of an FM organization with its client. The contractual agreement is cost-sensitive. Clients focus on cost reduction and FM providers aim to meet the service level agreement (SLA) and key performance indicators (KPIs). There is no risk and benefit sharing equally in this partnership. The input/ output transfers from a client to the FM providers as a top-down manner. The involvement of the FM organization is only at the operational level. FM products are required as a commodity, which has no significant difference among different FM providers. Because of the commoditization of FM products, there are many FM providers per client.
2. **Transactional partnership** is the equivalent of an information transferring relationship between FM providers and contract managers who are the clients' representative. FM providers and clients mutually share economic risk and benefit, however, cost reduction still plays a key role in the decision making process. For example, when organizations employ a Total FM (TFM) that enables the cost advantage from economies of scale and scope, with the benefits of a closer collaboration between the FM organization and client compared to the arm's length relationship. Where there are two to three FM providers per client, the FM organizations engage at the operational and tactical levels in order to align FM working processes with the client organization's primary activities.
3. **Operational partnership** is the shared mutual risk, benefit, trust and commitment relationship between the FM organizations and their clients. FM organizations and their client's relations move from spot market-driven relationship towards becoming the preferred partners. FM products are incorporated/ embedded into the organizations' primary activities and the client's core business. The degree of

knowledge sharing between the FM organizations and their clients is high. Facilities managers play a key role from tactical to strategic levels. There are usually one or two FM providers per clients.

4. **Vertical integration** is the mutually agreed relationship between the FM organization and its host organization. They share mutual risk, trust, benefit and commitment including the organizational bottom line. The roles and responsibilities of FM shift away from supportive roles to becoming an organizational core function. FM products are the primary activity which the organization's primary activities heavily rely on. The scope of FM activities is not only meeting the client's needs but also meeting the end user's needs. There is only a single FM provider per client because of this close relationship. The facilities manager can engage in the client's organization's decision making process. At a strategic level, FM and the client jointly create shared innovation and value.

To navigate the characteristic of the FM process, there are eight key attributes of the FM process as follows:

1. *-Types of Input/ output sharing:* What type of input/ output is shared between the FM organization and its primary stakeholder in term of data, information, knowledge and innovation? And how much "openness" of the input/ output sharing is in the dyadic relation between client and FM organization?
2. *Input/ output transferring direction:* How and which direction of input/ output would be transferred between FM organization and its primary stakeholders?
3. *Timeframe:* The expected duration of the contractual agreement between client and service provider.
4. *Contractual agreement:* How much and what type of benefit and loss sharing between the FM organization and its client?
5. *Ability to walk away:* The reliability from the demand side of FM products - to terminate the contract.
6. *Substitution:* The degree of dependency on FM products from a supply side.
7. *Mutual Involvement:* The managerial level involvement between the FM organization and its client's organization
8. *Number of FM providers per client:* The ratio of FM providers that directly and indirectly deliver FM products to stakeholders.

Table 4: Characteristic attributes of the FM process

Characteristic attributes	The FM process			
	Arm's length	Transactional partnership	Operational partnership	Vertical integration
Types of input/ output sharing	Data	Information	Knowledge	Innovation
Direction of input/ output transferring	Top-down asymmetry	Single-channel symmetry	Multi-channel symmetry	Openness

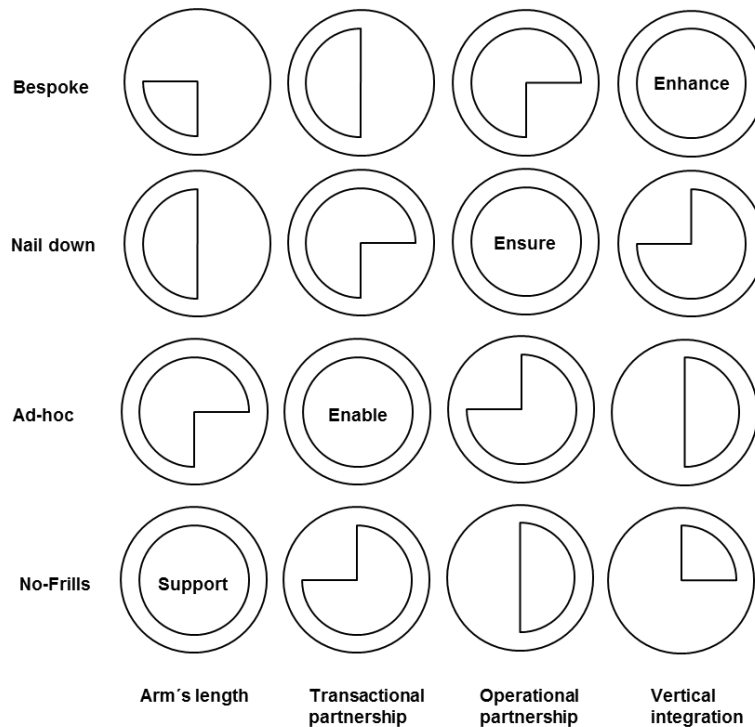
Time frame	Short-Short	Short-Medium	Medium-Long	Long-Long
Contractual agreement	No risk and benefit sharing	Risk and benefit	Risk, benefit, trust, and commitment	Risk, benefit, trust, commitment and bottom lines
Ability to walk away	High	Medium-High	Low-Medium	Low
Substitution	High	Medium-High	Low-Medium	Low
Mutual involvement	Low	Low-Medium	Medium-High	High
Number of FM Providers : Client	Many	2-3	1-2	1

Similar with FM products there is more than one type of FM processes in one organization. Each type of FM product requires a particular way to deliver and perception from the stakeholders. FM organizations need to develop the appropriate platform and channel to communicate chosen FM products to their stakeholders. The following section will propose the typology of matching FM products and FM processes that assist the FM organization and stakeholders to optimize their relationship between the supply and demand sides.

PRODUCT – PROCESS MATRIX

The product - process matrix is the consolidation of two building blocks, the FM product structure and the FM process structure. This matrix involves measuring FM products (what is FM offering) against FM process (how are the FM products being delivered and perceived) as shown in Figure 3. Positions on the matrix depict the interrelationship between the FM product and FM process structure in terms of FM value added position as described below.

Figure 3: A product- process matrix



From the matrix the proposition is that the cell that matches FM products with FM processes along the diagonal will deliver the value added to the stakeholders greater than the cell that is located away from the diagonal. Based on this matching in the matrix four different value added positions emerge:

1. Support

The main function of this value added position is to support the organizational primary activities on a regular on-going basis without disturbing the bottom prices. It can be implemented by achieving economies of scope and/ or scale. Cutting edge or forefront service provisions are not required because a role of FM is perceived as a non-core business function that cannot impact the outputs and outcomes of the core business. This is the cornerstone of FM products that provides the basic FM support that is required by all types of core business needs. FM plays a supportive role in the organization. As a result this category of FM product is usually contracted out to any external service providers who can meet the needs with the lowest cost. Any services or products that deliver the required performances to meet the minimum service level agreement (SLA) are perceived as similar. The client assigns this FM product specification and responsibilities to FM providers rather than co-creating between both parties. The downtime of the FM product does not critically impact the client's core business and operation because the FM process is not involved in the business processes and is almost irrelevant to the organization's primary activities. This type of FM role can be performed within the organizations as a back office function. This category of FM products has become a commodity and is recognized by all types of stakeholders. As a result, FM providers have to compete with the lowest cost to attract the clients and extend the contracts. It provides only short term impact-on the core

business. The relationship between FM organizations and their clients is likely to be 'hit and run' behavior rather than a long-term relationship. There are no risk and benefit sharing in this partnership. The informative data transferred from a client to FM providers in a top-down manner. The FM organization and other business units seem not to collaborate in terms of knowledge sharing.

2. Enable

For this category of the FM product the FM organization's role embraces the purposeful initiatives of not only supporting the activities of core business, but also enabling corporate capability and capacity. FM organizations and their clients establish one-off decisions and implementations responding to current organizational demands. FM providers need to collaborate with one or more business units such as marketing, human resource (HR), production and R&D in order to customize the FM product specification.

The occasional downtime would not create negative impacts to the core business. These organizations require for the reliable FM products. FM providers and clients mutually share economic risks and benefits, however, cost reduction still plays a key role in the decision making process. This category of FM products offers cutting-edge practices, performance framework, processes to enable organizational productivity, business profitability, operational efficiency and effectiveness and also end user satisfaction. With a short-medium time frame the expected outputs will need to respond to current corporate initiatives. It is required when an organization needs FM products for the specific purpose of enhancing its competitiveness or elevating itself to a position of industry leadership. The FM organization enables the current corporate strategy such as adding to the corporate brand value. FM engages in the operational and tactical levels in order to align FM processes with organizational primary processes. FM product specifications will be justified by clients together with one or more business units such as marketing and HR. Unlike the previous support position, under the ensure position, the FM organization must closely collaborate with its client. This type of FM position can be carried out in given organizations, for instance hospitality industry, retail shopping mall, concert hall and airport.

3. Ensure

With this value-added position the FM products focus on operational reliability by ensuring that the FM products continue to operate normally and without interruption. It can be seen in some specific core businesses for example, in laboratory, hospital and technological business setting. For this category of FM products any downtime will impact significantly on the operation of primary activities. FM organizations will generate a greater impact on the organizational core business when compared to the enable and support position. The primary activities will immediately experience the negative impacts to the core business such as loss of client royalty, loss of revenue and branding; with immediate impacts on the core business productivity and profitability. Hence, the FM organization plays a critical role to the host organization. It is necessary for the FM organization to perform as the best in class. FM activities and performances are embedded in organizational business process and FM organizations are highly involved in strategic decision

process. Moreover, the FM organization needs to collaborate with the larger group of business units especially operation directors for example, finance, human resource, R & D, marketing and operations. The novelty of the FM products does not require as the enabling role but yet necessity because the first priority of this role is to ensure and monitor the working situation of the core business activities. This is the most recognizable FM position where the organization that FM organizations are not the core business.

4. Enhance

For this category the FM organization becomes an indispensable part of its client's organizations at the strategic level. The aim of the FM product is to satisfy the client's customers, who directly impacts organizational outcomes; for example, revenue in the private sector or end user's wellness in the public sector. As the FM products immediately impact the end user's perceptions and satisfactions, their specifications are highly customized by the end user's requirements in order to enhance the end user's satisfaction and increase organizational productivities. Clients and the core business require the most reliable and innovative FM products, practice and framework to enhance the end user satisfaction. Any downtimes will immediately impact the organizational operation and outcomes. This value added position is relevant in the health care and retail industry, concert halls and airports. An FM organization co-creates the FM products specification with all relevant stakeholders involving from client, business units, and end users. End users might not actively participate during the decision making process but FM and client and business units have to consider end users as the primary stakeholder.

EXEMPLARY CASES

This section illustrates practical implications and applicability of the proposed matrix through six exemplary cases. The case selection criterion is to maximize variations that aim to highlight the potential applications and capability of the matrix for the various context and circumstances in public, private and state owned sectors. The empirical data collection was carried out by semi- structured interviews with both demand side such as client, customer and end users and supply side such as in house FM related managers from strategic, tactical and operational levels including FM service providers as shown on table 5. The duration of the interviews conducted was approximately 1-1.5 hours. The main interview theme focuses on an aligning of perception from demand side and implementation from supply side on added value of FM for instance: value added from FM service and provision to core business and surroundings, the relationship and involvement between FM organization and its internal stakeholders such as client, other business units, external service providers and end users and FM provision arrangement strategy. Based on methodology used, this research could be characterized as an abductive reasoning that combines both inductive and deductive reasoning. The preliminary FM product-process matrix which was developed from literature was applied through six exemplary case studies. The findings and results from this phase was further reviewed and assured by a focus group of 15 FM practitioners from Danish Facility Management Network (DFM). Applying theoretical framework to empirical evidences is considered as deductive reasoning. The formulated FM product-process matrix was refined and amended by results from case studies and focus group. Refining

the theoretical framework from the empirical evidences and is considered as inductive reasoning. This research employed both types of logic in order to develop the FM product-process matrix is thus considered as an abductive reasoning research.

Table 5 Interviewee(s) from each case

Case	Interviewee (s)	Number of interviews
LEGO	Facilities manager at the strategic and tactical level	2
MÆRSK	Facilities manager at the strategic and tactical level	3
PTT	Representative of the end user group Service provider at the operational level Facilities manager at the strategic and tactical level Client at the strategic level	6
HKSTP	Facilities manager at the strategic and tactical level	2
Dutch government	Facilities manager at the strategic and tactical level	3
Thai government	Facilities manager at the strategic and tactical level Client at the strategic level	3

Table 6 below shows the overview of the characteristic of the case study organizations.

Table 6: Case studies overview

Characteristic attributes	Case					
	LEGO	Mærsk	PTT	HKSTP	Dutch government	Thai government
Core business	Construction toys manufacturing	Logistics, oil and gas exploration, store retail, container tower, container shipping	Energy company	Facilities hub for technological corporations and start-up companies	Facilities hub for other governmental departments	Facilities hub for other governmental departments
Sector	Private	Private	State owned	State owned	Public	Public
Country	Denmark	Denmark	Thailand	Hong Kong	Netherlands	Thailand
FM organization's strategy intent	Placed in LEGO's production processes and activities	Providing the hassle free FM services	Established as an autonomous profit center	Offering up-to-date FM procurement and services	Standardizing FM product cost and quality	Centralizing widespread office locations and standardizing FM service cost and quality

Strategic choice	The right balance between cost and customization that fit the goals of the LEGO group	To get the best service at the lowest price	To get the acceptable FM service at the reasonable price	To offer the world class facilities service and laboratory to ensure best business result	To enable the current organization strategy	To get the best service at the lowest price
Sourcing arrangement	In- house and catering outsourced to ISS	Global total FM contract with JCI	FM organization elected as a self-governing agent for managing FM providers	Outsourced to ISS as a single service provider	Central government centrally manages FM providers	Central government centrally manages FM providers

Table 7 below presents an overview of usage of a product-process matrix to analyze value added positions in six exemplary case studies.

Table 7: Analysis of value added position in six case studies

Characteristic attributes	Case					
	LEGO	Mærsk	PTT	HKSTP	Dutch government	Thai government
FM product	Nail-down	No -frills	Ad-hoc	Nail-down	Ad-hoc	Ad-hoc
Key objective	To ensure organizational productivities by embracing with organizational primary activities	To support the primary activities at the lowest cost	To enable the current organization strategy	To ensure organizational productivities by embracing with organizational primary activities	To enable the current organization strategy	To enable the current organization strategy
Strategic intent	Exceed the basic needs/ Best in class	Meet the basic needs	Fulfill the specific needs	Exceed the basic needs/ Best in class	Fulfill the specific needs	Fulfill the specific needs
Primary stakeholder	Board of business unit directors	Client	Client and business units	Business units	Client	Client
Performance metric	Satisfaction	SLA, KPI	Capability creation	Satisfaction	SLA, KPI	SLA, KPI
Core-Periphery	Involve in organization primary activities	Almost irrelevant from Mærsk's primary activity	Compatible with a current organization strategy	Involve in organization primary activities	Almost irrelevant from organization primary activity	Involve in organization primary activities
FM process	Transactional partnership	Transactional partnership	Arm's length	Arm's length	Arm's length	Arm's length
Types of input/ output sharing	Knowledge	Data	Information	Knowledge	Data	Data

Direction of input/ output transferring	Multi-channel symmetry	Top-down asymmetry	Top-down asymmetry	Multi-channel symmetry	Single-channel symmetry	Single-channel symmetry
Contractual agreement	Risk, benefit, trust, and commitment	No risk and benefit sharing	No risk and benefit sharing	No risk and benefit sharing	No risk and benefit sharing	No risk and benefit sharing
Time frame	Medium-Long	Short-Short	Medium-Long	Medium-Long	Short-Medium	Short-Short
Ability to walk away	Low-Medium	High	Medium-High	Low-Medium	Medium-High	Medium-High
Substitution	Low-Medium	High	Medium-High	Medium-High	Medium-High	Medium-High
Mutual involvement	Medium-High	Low	Low-Medium	Low-Medium	Low-Medium	Low-Medium
Number of FM Providers : Client	1	1	1-2	1	Many	Many
Mapping value added position						
Best possible value added position	Ensure	Support	Enable	Ensure	Enable	Enable
	Color code : Current value added position Best possible value added position					

1. LEGO: From business partner to preferred partner

LEGO is a Danish construction toys manufacturing company. The FM organization makes an effort to embed its FM operation process into LEGO's primary activity. This aims to ensure the operation of the LEGO manufacturing process run smoothly with the lowest rate of operation downtime. It indicates the suggested value added position on the matrix is **ensure**. Thus, most of the FM services and activities are performed by in house workforces and only a catering service is outsourced to a third party service provider (ISS) that is treated as LEGO's internal staffs because LEGO wants its FM operation and performance complying with LEGO's corporate culture and practices. An FM organization arranges the monthly meeting with its stakeholders to align FM services with its senior management's expectation, production manager's needs and end user's satisfaction.

2. MÆRSK: Preventing vendor lock-in and hold-up situation

MÆRSK's core businesses are logistic, container shipping and tower container. FM activities are irrelevant from MÆRSK's working processes. The occasional downtime of the FM operation would not dramatically

lead to negative impacts on MÆRSK's core business. MÆRSK then requires the basic FM products that support the operation of primary activities without operation discontinuing. The total FM (TFM) concept is used in the MÆRSK sourcing arrangement by contracting out FM services and provisions to a single global FM provider (Johnson Controls Inc. (JCI)) with the global contract. MÆRSK gain benefits from economies of scope and scale but in the long run the incumbent service provider could cause the vendor lock-in and hold-up situation to MÆRSK. The position on the matrix suggests that MÆRSK should scale down the level of dependency and collaboration with its vendor (from transactional partnership to arm's length) to prevent the high switching cost in the future. The best possible value added position on the matrix is **support** because of the arm's length process with the no-frills product.

3. PTT Public Company Limited (PTT): Semi-autonomous FM company within the corporation

PTT is a Thai state-owned energy company. Previously, subsidiary companies of PTT's host organization rented office spaces separately around Bangkok and contracted out FM services individually. In order to consolidate the redundancy of workplace and FM services among its subsidiary companies and to reduce the FM operating costs, ENCO was established as a semi-autonomous company responsible for managing FM service and provision for the new office campus. ENCO is perceived as the profit center by charging rental and FM service fees from its tenants at the market's price. This office campus is intended to be the multi-tenants' office for subsidiary companies by sharing the common area including common FM services for example, security, cleaning and catering. The best PTT value added position in this context is **enable** because its centralizing this business sector into single location and managed by an internal FM organization will optimize the effectiveness and the efficiency of FM product and FM process.

4. Hong Kong science and technology parks (HKSTP): Aligning internal knowledge with external knowhow

HKSTP is a state-owned organization that mainly provides workplace and laboratory facility for technology-oriented start-up companies and multinational corporations. This project aims to provide the world class technology support and laboratory service within dynamic environment enabling start-up companies to nurture ideas and innovation development. In HKSTP office campus there are approximately 10,000 end users and 400 tenants sharing the central infrastructure and FM service such as parking area, canteen, reception area, security service, gardening and outdoor space. Its strategic intent indicates that value added position of the FM organization is categorized as **ensure** because technology-savvy tenants demand the most reliable FM services and provisions to ensure their operations and activities. A FM organization attempts to be embedded in the tenant's activities. In order to bridge the internal needs from end users and tenants with the external FM skill and expertise, an FM organization in collaboration with a service provider (ISS) initiated a facilities manager trainee program that aims to develop and cultivate the role model of FM practitioners who have the appropriate FM knowledge ranging from technical skill to managerial skill.

5. Dutch central government (DUTCH): Cutting the cost by sharing FM provision and services

In order to reduce the operating costs, leverage the working standard and standardize work practice the Dutch central government commenced the organizational merger and consolidation from thirteen business units into one standard format. As a result FM as a support function from each public department was amalgamated into one single department and reports directly to the central department. The FM organization is perceived as a cost center providing the stripped down FM services and provisions to new merged organizations. The scope of works covers space acquisition, facilities management and asset management for all public departments. The proposed value added position for this case should be **enable** because it helps the Dutch central government to optimize its FM service and outcome including downsize FM workforce. This organizational change process requires high degree of collaboration and involvement from each business unit.

6. Thai central government (THAI): Co- location and Co- FM services

Thai central government initiated the new office campus project where each public department from different locations shares the common area and standard FM services involved in order to minimize the redundancy of workplace and FM services among its public departments. An FM organization from the central government provides the basic facility service such as security, cleaning service, reception, gardening and parking area. An FM organization and the representatives of tenants need to be closely collaborating in order to match the right FM service with their tenants' expectations. The suggested value added position based on co-location and co-FM services is **enable** because this given FM initiative allows the one-off organizational capacity by reducing the FM operating costs.

DISCUSSION

An FM product-process matrix introduced in this paper comprises a two dimensional structure for identifying an appropriate match between FM products and FM processes. The main rationale of the FM product-process matrix is to find an efficient matching of product and process based on the trade-off between costs and benefit involved. FM organizations must align and allocate FM products that meet the needs and requirements of its stakeholders' discretion and decision. Each type of FM product requires a specific type of FM process. An FM organization does not need to pursue the higher managerial level than arm's length, if clients require only *no-frills* product. On the other hand, when clients require *nail-down* products, FM organizations and their clients need to adopt the operational partnership approach which is closer to core business than *no frills*. This contribution strengthens the propositions of Jensen (2011) and Lehtonen (2006) who both suggest the close collaboration/ relationship of FM and its client as the determining factor to add value to its core business. The key premise is that once an FM organization delivers FM products that solve its stakeholders' problems and get the job done, the FM organization already fulfills the most suitable value added delivery to the client's core business and surroundings. However, one could not distinguish the value delivery from each combination of FM product and FM process. This study challenges the conclusion of Kaya and Alexander (2005) who used pattern recognition for classifying FM organizations and concluded

that *FM organizations are perceived from their stakeholders as a support role*. The proposed matrix shows that there are four types of FM's role as discussed above, depending on the nature of the primary activities, corporate culture and the needs of the FM products. This paper revisits and expands the proposed *managerial level* of FM researchers on potential leverage of FM role from operational to strategic level. Different stakeholders from various managerial levels would justify the FM organization's role based on their interactions between their activities and FM's performances. The efficiency and effectiveness of different repositioning strategies has not been explained by normative theories of FM in previous seminal frameworks. This contributes to a better understanding of how FM organizations should be structured and organized based on the choices of FM value added positions. This study thus expands on the conclusions of Chotipanich (2011) and Price (2004) on studies of FM strategy by classifying four existing FM value added positions. The section discusses the applicability of an FM product-process matrix into three dimensions 1. On the FM product spectrum 2. On the FM process continuum and 3. Along the diagonal.

1. On the FM product spectrum

The FM product spectrum depicts the four types of FM product varied on the degree of specificity between primary stakeholders and FM products. The higher the FM product specificity position is located at the exterior of the spectrum as shown in figure 1, the more it encapsulates prior types of FM product on the FM product spectrum. For instance nail down product will offer not only the high reliable FM product but also standardizing and one –off business capacity and capability. The research proposes that the higher position on the FM product spectrum provides the accumulated value to a core business and related stakeholders. The accumulated value does not imply to adding more value but it refers to FM organizations contributing more than one type of value. For example, because the downtime of FM product will significantly impact the production and operation of their organizational productivities, LEGO and HKSTP deliver a nail down product by offering the high reliable FM product and FM technical specialization to ensure their host organization primary activities. LEGO and HKSTP are not only providing the specific FM technical knowledge and expertise but their host organization is also benefiting from economies of scope and scale of FM product.

Moving upward on the FM product spectrum is to increase the level of specificity between FM product and its core business and related stakeholders. The degree of customization and complexity of FM product accumulates from the prior FM product level. The higher specificity generates the more dependency between FM organizations and its stakeholders. The more dependency FM product, FM organizations have to liaison with more groups of stakeholders. From the supply side, the risk of having high dependency with FM product is development of the lock- in situation which can be between core business and its FM organization, FM external service provider and FM employees at both operational and strategic levels. The lock-in situation can raise the high switching cost if clients want to terminate the incumbent service providers and also the transition process from the existing vendor to the new one is more complicated in terms of time, administration and operating costs.

Moving downward on the FM product spectrum is to decrease the level of specificity between FM product and its core business and related stakeholders. The degree of customization and complexity of FM product lessens from the prior FM product level. The lower specificity generates the lower dependency between FM organizations and its stakeholders. With less dependency FM product, FM organizations have to liaison with fewer groups of stakeholders.

Six case studies show that every organization requires for FM product the benefit gained and value added from economies of scope and scale that aims to standardize the perceived quality of FM product and to reduce the FM operating and administrative costs. It can be concluded that no-frill product is the prerequisite requirements for FM organizations to deliver to the core business and related stakeholders. The other benefits and value added can be accumulated according to the particular requests and requirements. For example, PTT and THAI central government can enable their organizational capacity by consolidating the redundancy of office building and centralizing the individual office locations into one office campus. This FM initiative can be considered as ad-hoc product that increases a one-off value creation and responses to the emerging needs from the demand side. This type of FM product would not continually add value and benefit to the host organization from time to time which is differed from a nail down product. For example, both HKSTP and PTT centralized their tenant's individual office locations into one single office campus and shared the common FM product but HKSTP that aims to provide nail down product can create a continual value added to the production and operation of primary activities.

According to the DFM practitioner's feedback, they pinpointed that at some certain points and time, FM product will reach the stage of FM Product maturity when any of them are commoditized by the both internal and external factors such as the maturity of end user's perception toward FM product and the indifference of FM service provider's capacity. In this case, ad hoc product can assist FM organization to stimulate and shift away the FM product maturity situation such as enabling end user's satisfaction and organization reputation. For example, when a FM organization voluntarily introduced and implemented environmental assessment methods such as LEED and BREEAM, the host organization can brand itself as an environmentally conscious corporation. But when these environment practices become the basic requirement by laws and other organizations widely practice, those given organization could not sustain this value added. This example can describe the external factor that influences the maturity of value added by FM product. For the internal factor, for instance, when employees who work in the fancy and playful office design and layout such as Google Corporation get accustomed to this particular design, they do not any longer feel impressed with their workplace. Designers together with facilities managers may need to stimulate their end user's satisfaction again with the newer strategies.

The strategic decision on positioning and re-positioning FM product or moving from the upward and downward on the FM product spectrum is mainly driven by the characteristic of core business and its primary activities. It is the predetermined condition that justifies the need and specificity of FM product. For example the research and development (R&D) oriented organization such as HKSTP and LEGO are likely to require for more reliable laboratory buildings and workplaces than other types of organizations. FM organizations

have to provide the specialized FM knowledge and operational expertise that highly involves in the organizational primary activities and core business.

2. On the FM process continuum

The FM process continuum exhibits the four types of FM process varied on the degree of collaborative relationship between demand and supply side as shown in figure 2. A supply side refers to primary stakeholders that specify the needs of FM products such as client, customer and end users. A demand side refers to FM organizations that deliver FM product to stakeholders such as in house FM organization, external service provider and FM staff at the operational level. Each of FM process has its particular primary stakeholder based on the need of FM products. Moving forward and backward on the FM process continuum is neither FM manager's discretion nor purely client's decision but rather driving by the characteristic of core business and corporate culture.

Moving forward on the FM process continuum is to increase the level of collaborative relationship between FM organization and its primary stakeholders. The higher collaborative relationship increases the level of interdependency between FM organizations and its stakeholders. Communication platform such as facilities committee in LEGO is the starting point to increase the level of collaborative relationship between FM organization and LEGO's business units who are the primary stakeholders. The DUTCH central government should move forward from transactional relationship to operational partnership because the consolidation and centralization of FM practices into one standard require a whole organizational reengineering. It impacts on the strategic changes from an organizational level such as organization structures, legal form, form of co-ordination, external market, contractual, center concept, a departmental level such as service charges, and product/ service portfolio and an individual level such as changing job descriptions and job –cutting/ laying off. On the other hand, THAI central government and PTT that centralized tenant's office locations into one office campus, should move forward from arm's length to transactional partnership but not operational partnership because they do not standardize each tenant's FM practices, they solely centralize and share the common area.

Moving backward on the FM process continuum is to decrease the level of collaborative relationship between FM organization and its primary stakeholders. The lower collaborative relationship decreases the level of interdependency between FM organizations and its stakeholders. Moving backward can create value to the demand side by reducing the power of FM organization and interdependency between both parties. For example, this research suggests that MÆRSK should scale down its FM process from transactional relationship to arm's length to avoid and prevent hold- up problem and vendor lock- in situation. It would decrease the degree of interdependency between MÆRSK and JCI in terms of managerial knowledge and operational expertise. If MÆRSK heavily relies on and engages with JCI's capacity and capability, it would be difficult to walk away and find the new compatible FM service provider. The consequences of moving forward and backward on the FM process continuum are the ability to walk away and substitution between FM organization and its host organization. Ability to walk away is possibility for the

supply side to terminate the contractual agreement with the incumbent FM organizations. Substitution is possibility for the demand side to switch to other possible service providers. LEGO perceives itself as a family owned corporation and because of LEGO's corporate culture, LEGO's FM preferably manages and keeps FM product in house rather than outsourcing to third parties. In house FM organization can practice and deliver FM products that comply with LEGO code of conduct, corporate culture and operation of LEGO primary activities. The facility committee was established in order to collaborate between demand and supply side. It can be seen that a FM organization aims to move FM process forward from transactional partnership which is responsible for one business unit to operational partnership which is the group of LEGO business units. The primary stakeholder is the board of LEGO business units especially production and operation in the LEGO production facility. Value added is emerged from the better understanding of operation of LEGO primary activities that is difficult to re-employ by other service providers. On the contrary, MÆRSK's corporate culture is to stick to MÆRSK's organizational capacity and capability to the core business and assign the non- core activities such as FM product to the third parties. MÆRSK decided to outsource FM products to global FM service provider, because JCI has a capacity to manage FM product. Value added is emerged from economies of scope and scale. HKSTP decides to outsource FM products to ISS as a main service provider but also trying to create in house facilities manager that helps to liaison with both demand and supply sides. It is the example of combining both in house's benefit as shown in LEGO and outsourcing benefit as shown in MÆRSK by using facilities manager as a middle man who supervises the single FM service provider, ISS and liaison with the needs of the internal stakeholders especially tenants. Value added is emerged from knowledge exchange from external knowhow with internal knowledge.

3. Along the Diagonal

Four value added positions are emerged by matching the needs of FM product and the proper FM process exhibited in figure 3, FM product-process matrix. This research proposes that matching the needs of FM product with the proper FM process will create best value added to the core business and related stakeholders. Each value added position has its own merit and specific value to core business and related stakeholders. From the FM product-process matrix, the FM value added position located on the diagonal of the matrix can deliver the value to stakeholders more than one located off the diagonal. The scope of value added analysis is within the organizational value chain and it is dyadic relationship between FM organization and its selected primary stakeholders. FM organization can create different types of value added by stepping up or down along the diagonal. Step up along the diagonal refers to value added that increases the level of influences on the organizational business outcome. It requires higher degree of specificity from FM product and higher degree of collaborative relationship from FM process between FM organization and given groups of stakeholders. For example, MÆRSK employs the total FM provision arrangement by globally contracting out FM product to the single FM service provider, JCI. Although, JCI provides the no-frills product which is not significantly relevant to MÆRSK's core business and primary activities, JCI can create the hold- up problem to MÆRSK because JCI possesses FM managerial knowledge and operational expertise over MÆRSK. To avoid and prevent this problem, MÆRSK need to prepare for an exit strategy to leave this relationship in case that MÆRSK wants to switch and terminate the contract with this current FM vendor in

the future. For example, PTT, THAI, and DUTCH value added positions are enable because they are responsible for an emerging need and can create value added to the host organizational core business by increasing organizational capacity and capability. All of them use the concept of shared service to manage FM sourcing arrangement and it can be seen as a tool for adding and creating value to the organization. While the main purpose of implementing shared service concept is being cost effective by reducing the operating cost and eliminating the duplicate FM functions, they can improve and standardize the FM product qualities. It allows the host organization focusing on their primary activities with the effective and efficient FM product. For example, HKSTP and LEGO value added positions are ensure because they can create value added to the host organizational core business by ensuring operational reliability and business continuity. Because of the nature and requirement of R & D business, they need to ensure the continuity of their host organization's primary activities with the lowest rate of operation downtime. Stepping down along the diagonal refers to value added that decreases the level of influences on the organizational business outcome. It requires the less degree of specificity from FM product and the less degree of collaborative relationship from FM process between FM organization and given groups of stakeholders. For example, MÆRSK value added position is support because MÆRSK can create value added to the host organizational core business by economies of scope and scale by outsourcing FM product to the one service provider. It allows the MÆRSK's core business focusing on their primary activities with the standardized FM product and expected cost.

CONCLUSION

The question of finding the best value added position for a given FM position is not addressed in previous literature reviewed. From the matrix it argues that a given value added position has its own merit depending on host organizational core business needs and requirements of FM products. Once FM organizations deliver FM products that solve stakeholders' problems and get the job done, FM organizations already carry out the most suitable value added delivering to the core business and surroundings. The main proposition of this research is that in order to best add value to the core business and related stakeholders, FM organizations have to deliver the expected FM product with the appropriate FM process and mismatching will de-value the FM product delivering.

This decision making tool can be used to assess the existing FM value position choice and project for the next desirable value position. It can be used to frame and reframe the dialogue between stakeholders and facilities managers both from the internal FM organization and to service providers. It offers a systematic tool for repositioning strategies of FM activity and organization from the FM organization level to corporate level within the client's organization. This normative FM product-process matrix will illustrate FM value positions which are the relative value delivering position from the FM organization to its stakeholders. From an FM practitioner's standpoint a product-process matrix has the potential to be useful both as a self-diagnostic tool and as a strategic planning tool.

- As a self-diagnostic tool the matrix can be useful to FM providers for examining the causes of poor service quality and customer dissatisfaction resulting from a mismatch between FM products and FM processes. An FM product-process matrix provides FM practitioners with a systematic way to investigate their host organization core business and the stakeholders' influence on the determinants of the FM products needed.
- As a strategic planning tool the matrix can be useful to service providers in designing or redesigning an FM organization by aiding in the choice of FM products and appropriate FM processes. This tool can be generally used as a platform for defining and delineating FM product specification, making a decision on FM provision arrangement on in- house, outsource and/ or shared services, selecting the capable service provider and determining on the characteristic of the contractual agreement, evaluation the on-going FM performance for improvements, re-evaluation and project for the possible FM product specification, FM provision arrangement, service provider, and contractual agreement.

The matrix allows for an explanation of the changes of not only the positioning of individual FM services, activities and performances but also the restructuring of the entire FM organization within its host organization and other business units. It is also a visual aid tool for FM practitioners. It can be used to frame the continuous dialog between FM organization and its client and related stakeholders. It helps FM organizations to project the best value added and to assess the existing value added. FM's client can evaluate and project FM organization's performance vice versa. This matrix can be applied not only in the FM industry but also for other organizational support functions such as HR, ICT, finance, and marketing for the mapping of appropriate value added position. There are five propositions from the proposed product-process matrix that are worth emphasizing in this section:

1. The matrix can analyze the wide ranging scope of the FM product category from a single FM product, an FM product bundling to an FM product portfolio.
2. For FM activities, the FM value added position located on the diagonal of the matrix can deliver the value to stakeholders more than one located off the diagonal.
3. There are four possible value added positions along the diagonal that match four types of *what does FM offer to stakeholders?* (FM product) with four types of *how can FM product be offered to stakeholders* (FM process)? Namely: *support, enable, ensure and enhance*.
4. Each of the value added positions identified above has its own merits and added value based on the nature of the organization, corporate culture, primary activities, specific stakeholder needs and requirements. FM organizations can best add value to their host organization core business and surroundings when FM organizations can **discover** what each stakeholder really needs from FM organizations, and **define** and **develop** the most appropriate way to **deliver** the FM product to the stakeholders.

5. The most appropriate delivery approach can be operational, tactical or strategic level. Thus it is unnecessary for FM organizations to pursue the higher or relegate to the lower managerial hierarchy if that given managerial level does not match with the FM product delivery.

The proposed product-process matrix is naturally oversimplified and parsimonious. It represents an explorative work in nature. The role and influence of stakeholders including end users, customers and external FM service providers have been examined and discussed. Six exemplary cases were used to elaborate all possible positions on the matrix. For example, none of them shows an *enhance* role. The proposed matrix needs more empirical validations. A logical extension for further research is to conduct empirical analyzes to validate the categories of the FM product structure and the stages of the FM process structure in cross-sectional and longitudinal empirical analyses. It would be to empirically investigate how the fit between classifications of the FM product structure and stages of the FM process structure impacts stakeholder's perceived value and how stakeholder's influence determines the choice of FM product and FM process. All the value added positions on the proposed product-process matrix need more quantitative-empirical study. It should determine which FM value positioning matrix is best or which criteria are best per axis.

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Stakeholder influenced strategy in facilities management: A case study of energy complex (ENCO), Thailand

ABSTRACT

Purpose: This paper aims to provide insights into stakeholders' behavior that influence facilities management (FM) strategy. This contribution allows FM organizations both in house and FM providers understand each type of relationships with their stakeholders under various different circumstances and conditions.

Methodology: The research conducted semi-structured interview with 7 representatives of the Energy Complex (EnCo) and its key stakeholders, PTT Public Company Limited (PTT), tenants and service provider, and additional data in the form of reviews of websites and internal documents. However, interviews were carried out only with primary stakeholders who have direct contact with EnCo but not secondary stakeholder who have indirect contact for instance end users, facilities sub-contractors. Four propositions derived from Frooman (1999) forms the basis for data analysis.

Findings: The results show that stakeholders influence FM strategy chosen by controlling resources for instance financial, informational and physical. Stakeholders are able to control resources directly with FM or indirectly through allies. Each type of resource control strategy affects the collaborative relationship between both parties.

Practical Implications: This paper proposes an analysis framework to explain and predict FM stakeholders' behavior extended from Frooman's typology. It provides the basic information for strategic decision making on how stakeholders influence FM strategy and each strategic style that stakeholders use to influence FM strategic decision. The better understandings of stakeholders' behavior will incubate the added value delivering to FM stakeholders

Research Limitations: The data collection was carried out by the single case. For the future research, it should investigate in both private and public sectors and different types of host organization's core businesses.

Originality/value: This paper extends the application of stakeholder- influenced strategy's theory in a FM setting. It attempts to address the scarcity of stakeholder management perspective in FM and how stakeholders influence FM strategy and how they choose to influence FM. It allows FM organizations understand stakeholders' behavior and enable better communication among them.

Keywords: Stakeholder influence strategy, Added value, Strategic position, Stakeholder analysis, Relationship management

INTRODUCTION

If strategic planning is indeed a crucial part of a facilities manager's job, then understanding how stakeholders try to influence facilities management (FM) organization has to be a crucial part of facilities manager's job too. Poor stakeholder management can cause time delays and cost overruns (Yang et al. 2009). Different stakeholders have different levels and types of investment and interests, so facilities managers should communicate with all the parties to satisfy their needs. Many researchers in stakeholder management address the needs of managing stakeholders as shown in table 1.

Table 1: The importance of managing stakeholder (Yang et al. 2009)

Researcher	The importance of managing stakeholders
Mellahi and Wood (2003)	It is an important method for increasing the likelihood of achieving the marketplace success
Clarkson (1995)	The corporation's survival and continuing success depend upon the ability of its managers to create sufficient wealth, value, or satisfaction for stakeholders
Alexander and Buchholz (1982)	High levels of responsibility towards primary stakeholders can lead to lower explicit costs
Caulkin and Black (1994); Kotter and Heskett (1992)	The performance of companies that balanced the interests of all their stakeholders is better than that of those which put their shareholders first
Donaldson and Preston (1995)	Adherence to stakeholder principles and practices tended to achieve conventional corporate performance objectives better than rival approaches
Preble (2005)	The mismanagement of stakeholder activist issues can result in lost markets and revenues, a decline in share prices, large legal fees, as well as wasted management time

Frooman (1999) explains in his seminal work that in developing strategies concerning stakeholders, it seems that managers need to answer three general questions about stakeholders: *who are they* (this question concerns their attributes), *what do they want* (this question concerns their ends), *how are they going to try to get it* (this question concerns their means). FM researchers (Lehtonen 2006, Barrett 2000, Burstow 1994, Katchamart 2011) address the importance of the last question in term of a collaborative relationship. They assert that the success of a collaborative relationship leads to the success of value delivering to the stakeholders. In order to cultivate the successfully collaborative relationship with its stakeholders, FM needs to understand stakeholder's behavior and how they would influence FM strategic decision. However, there is scarcity of understanding stakeholder's behavior in FM academic literature.

Then, this paper aims to provide insight into stakeholder management in FM as a point of departure to deliver value adding to host organization's core businesses. Here, a proposed framework is an extended framework of Frooman's typology to predict and explain the strategies and actions that FM organizations

and stakeholders adopt against each other in a conflict situation. It allows FM organizations to assess their stakeholder behaviors that influence FM strategic decisions and vice versa.

To delineate the boundary of stakeholder identification, this paper terms stakeholders by Freeman (1984) 's "can affect" and "affected by" criteria. FM stakeholders, thus, refers to any group or individual who affect or is affected by FM strategic planning decisions: end users, clients, customers, service providers, sub-contractors.

RESEARCH CONTEXT

A data collection process was carried out by semi-structured interviews with 7 representatives of Energy Complex (EnCo) and its key stakeholders, PTT Public Company Limited (PTT), tenants and service provider, and additional data in the form of reviews of websites and internal documents. The research investigates the influence of stakeholders upon relationships of EnCo among its stakeholders. The case background will be described below.

PTT is a Thai state-owned energy company. It owns extensive submarine gas pipelines in the gulf of Thailand, a network of liquefied natural gas (LPG) terminals throughout the country, and is involved in electricity generation, petrochemical products, oil and gas exploration and production, and gasoline retailing businesses. PTT is one of the largest corporations in the country and it is also the only company from Thailand listed in the Fortune Global 500 companies and ranks 118 among top 500 companies in the world and 25 in Asia.

PTT Group has business expansions that require much larger office space in order to handle the increase in number of their workforce. Moreover, the Ministry of Energy (MOE) also requires a building to integrate its various departments that had spread out in different locations around Bangkok. PTT initiated a project in 2004 for the construction of EnCo as the office building for PTT's affiliated energy-related companies and MOE's departments, so as to save time in business communication and to boost operating efficiency. This project was completed and occupied in 2009. Centralizing this business sector into single location will enhance the effectiveness and the efficiency of all the communications. This complex will be represented as a hub of all the energy businesses in Thailand. EnCo has been described as Thailand's first truly energy efficient property development and was designed under the LEED system. The project area is 298,542 m² with 8,000 occupants as shown in Figure 1, (Internal document, EnCo, 2009).

With the aim of combining architectural and engineering innovations into EnCo, these innovations have resulted in the Energy Complex building that serves as the prototypical building in Thailand for energy conservation, harmonious coexistence of industry and the environment, and optimal utilization of resources while improving the quality of life for people in and around the buildings. In this respect, the building occupants, society at large and the environment can coexist and thrive in a sustainable manner.

Figure 1: The Energy Complex (EnCo)



PTT Group and the MOE have agreed to develop the Energy Complex Co., Ltd which is responsible for the project construction and operational management of this building campus, by contracting out the property and facilities services to one service provider, CB Richard Ellis (CBRE). CBRE's responsibilities provides general facilities services for EnCo's common and shared area, parking lot and each tenant has its own facilities providers which is out of EnCo's and CBRE's responsibility. CBRE performance is under EnCo's supervision. CBRE can contract out subcontractors under EnCo's permission, for instance OTIS for elevator and escalator services. There are monthly meetings between EnCo, subcontractors, representatives of 26 Tenants from both PTT's core affiliated companies and MOE's departments to discuss and share the information and opinion among each party. Each tenant will in turn host the meeting venue. The meeting aims to incubate better understanding and relationship among EnCo, tenants and CBRE.

THEORETICAL DEVELOPMENT

This research utilizes Frooman's typology as a basis to analyze the management of firm-stakeholder resource relationships in the context of FM, with the "firm" being EnCo, and the key stakeholders, as identified by EnCo itself, being PTT, Tenants, End users, CBRE, CBRE's subcontractors. Together with facilities process framework, (Katchamart, 2011), it focuses on collaborative relationships between FM organizations with their clients who are the representative of stakeholders.

Frooman's (1999) grounds his typology in resource dependence theory (RDT). Resource dependence is built on the notion that organizations are not completely self-sufficient, but are reliant upon other organizations in their environment to provide the resources they need for survival. Frooman's provide heuristics with which researchers can develop understanding of complex organizational phenomena. This external control of organizations is at the core of the resource dependence perspective. As Pfeffer and Salancik (1978) state, "for continuing to provide what the organization needs, the external groups or organizations may demand certain actions from the organization in return".

Frooman (1999) identifies different types of resource relationships in terms of dependencies. Dependence within firm and stakeholder relationships is related to the control of resources, whether these resources are

financial, physical, or informational. Power in resource relationships may be asymmetrical, where one actor is more powerful than others due to that actor's control of critical resources. Alternatively, a symmetrical power relationship occurs when there is an equal level of dependency between actors. It is important to note here that Frooman (1999) deviates from more traditional views on power, viewing it as an attribute of firm–stakeholder resource relationships, not of the actors themselves.

He defines four types of resource relationships: stakeholder power, firm power, low interdependence, and high interdependence. In reality, levels of power and dependence range within these variables. However, like all typologies, Frooman's work demonstrates “ideal types” that are helpful for understanding the nature of the focal resource relationships.

Frooman's (1999) typology illustrates the connection between resource relationships and stakeholder strategy selection. As stakeholder power is determined by the nature of dependency (Molm et al., 1999), the direction and extent of dependency determines the power advantage within a particular firm–stakeholder relationship (Frooman, 1999). Frooman's influence strategies are underlined by two defining aspects of stakeholder relationships: (1) resource control; and, (2) influence pathways. Each set of influence strategies and their respective characteristics are depicted in Table 2, and explained below.

Table 2: Resource control strategies and influence pathways

Resource control strategies	Characteristics of the strategy
Withholding	Stakeholder discontinues or threatens to discontinue supply of resources to a firm
Usage	Conditions attached to the supply of resources, firm cannot afford to walk away from relationship
Influence pathways	Characteristics of the pathway
Direct	Stakeholder manipulates the flow of resources
Indirect	Stakeholder works through an ally to manipulate the flow of resources

As shown in Table 2, Frooman's (1999) resource control strategies divide into two types: withholding and usage strategies. Withholding strategies occur when a stakeholder discontinues, or threatens to discontinue, the supply of resources to a particular firm with the intention of forcing change in certain behaviors.

The stakeholder threatening withdrawal must have the ability, or at least, be perceived to have the ability to walk away from the relationship and survive if a threat must actually turn into action. When this is not possible and a stakeholder is unable to shut off the flow of resources to a firm, Frooman suggests a second type of resource control strategy, that of usage.

Usage strategies occur when dependence is more evenly shared and the stakeholder cannot afford to shut off the flow of resources. Thus, rather than completely withholding resources, the stakeholder attaches

conditions to their continued supply (Frooman, 1999). Similar to withholding strategies, despite resistance, usage strategies are used to drive change in firm behaviors. Obviously, when interdependent relationships exist, actors are more prone to simply accommodate the needs of each other (Frooman, 1999).

Frooman's (1999) second set of stakeholder strategies relate to the identity of the actor supplying resources to a firm. Indeed, withholding and usage need not always be undertaken by a stakeholder, but may be performed by an ally of the stakeholder that has an established relationship with the focal firm (Frooman & Murrell, 2005). The existence of such allies opens up pathways of direct and indirect influence through which the stakeholder can exert resource control (Frooman, 1999; Frooman & Murrell, 2005). As resource relationships are often embedded in other relationships, multiple pathways of stakeholder influence can emerge. Thus, Frooman (1999) identifies two influence strategies: direct and indirect.

Direct influence strategies are where the stakeholder manipulates the flow of resources unilaterally. This often occurs in relationships of high dependence, when a firm must be directly responsive to the demands of the stakeholder supplying resources necessary for its survival. Meanwhile, indirect influence refers to the circumstance where, "a stakeholder works through an ally, by having the ally manipulate the flow of resources to the firm" (Frooman, 1999). Indirect influence is founded upon communication among allies, which connotes political activity and coalition building among stakeholders.

Table 3 indicates the firm–stakeholder relationships that Frooman (1999) suggests lend themselves to the employment of particular influence strategies. In relationships of low interdependence, indirect and withholding influence strategies are appropriate. In relationships where stakeholders hold power, direct and withholding strategies are used. Alternatively, stakeholders use indirect and usage strategies to influence firm behavior in relationships where the firm is more powerful than its stakeholders. Finally, in resource relationships of high interdependence, stakeholders typically employ direct and usage influence strategies.

Table 3: Stakeholder relationship which influence strategy

Stakeholder relationship	Influence strategy
Low interdependence	Indirect/withholding
Firm power	Indirect/usage
Stakeholder power	Direct/withholding
High Interdependence	Direct/usage

Katchamart (2011) characterized FM process by the degree of mutual involvement and degree of data transferring as shown in table 4. Facilities process defined as the collaborative relationship between FM organizations with their clients who act on the behalf of the rest of stakeholders. Facilities process focuses on how FM organizations deliver facilities services and how facilities services are being offered and being perceived from their clients (Katchamart, 2011).

The right communication is the key success factor to deliver the right value to the group of stakeholders. FM organizations fully deliver stakeholder value when they could communicate to stakeholders what and how they offer. Stakeholders, who perceive the facilities products, will fully acknowledge the offered value when they understand FM working process and even jointly co-create FM working processes. Facilities process initiates from the communication channel which refers to spaces or arenas where data, information, knowledge and innovation can be transferred between both parties; FM organization and stakeholders. The communication channels impact the organizational decision making. Typically, facilities managers act on the behalf of FM organizations and clients act on the behalf of stakeholders who perceive and impact from facilities products. Moreover, the flow of communication is typically one-way communication from client to facilities manager. This facilities process suggests that if channels are broadened, the delivering value will be increased. Value delivering from FM process is increasing from arm's length to strategic alliance depending on degrees of "mutual involvement" and "data transferring" between FM organization and its client.

Table 4: The attribute of relationship, adapted from Katchamart (2011)

Type of Relationship	Attribute			
	Degree of Mutual Involvement	Degree of Data Transferring	Mutually Agreed Goal	Degree of Managerial Involvement
Arm's Length	Low	Data	No risk and benefit sharing	Operational
Market Partnership	Low-Medium	Information	Risk and benefit	Operational-Tactical
Operational Partnership	Medium-High	Knowledge	Risk, benefit, trust, and commitment	Tactical- Strategic
Strategic Alliance	High	Innovation	Risk, benefit, trust, commitment and bottom line	Strategic

FINDING AND DISCUSSION

The results from 7 semi-structured interviews with EnCo representative and EnCo's primary stakeholders are shown in table 5. This paper draws the data analysis from two researchers (Frooman, 1999 and Katchamart, 2011) as mentioned above.

Table 5: EnCo and its stakeholder's behaviors

EnCo relationship with	Resources at stake	Influence strategy	Stakeholder relationship	Potential allies	Facilities process
PTT	Legitimacy	Direct/ withholding	Stakeholder power	Tenants	Market partnership
Tenants	Legitimacy	Direct/ usage	High interdependence	End users	Strategic alliance

End users	Legitimacy	Indirect/ withholding	Low interdependence	Tenants	Arm's length
CBRE	Know-how/ workforce	Indirect/ usage	FM Power	CBRE's subcontractors	Strategic alliance
CBRE's contractors	Know-how/ workforce	Indirect/ withholding	Low interdependence	CBRE	Arm's length

EnCo ↔ PTT

EnCo is non energy-related PTT's affiliated company. EnCo as entity perceives itself as a profit center. EnCo's contribution impacts on PTT's bottom line by reducing the cost of space rental. However, EnCo is not located itself in PTT's organizational value chain. PTT can be perceived as an EnCo's primary client at the strategic level. PTT has legitimacy over EnCo by controlling EnCo resources for instance, financial, decision authority and strategic decision. PTT conducts EnCo's corporate strategy. PTT directly supervises and monitors EnCo's performance both financial and operational. PTT manipulates the flows of resources and direct the power over EnCo. There is information asymmetry transferring between EnCo and PTT by top-down approach from both-end strategic levels. The data and information among parties is shared as necessary. EnCo mutually share risk and benefit with PTT.

EnCo ↔ Tenants

Tenants are EnCo's primary customers who have direct communication platform with EnCo. Tenants has legitimacy over EnCo in term of business partners which means EnCo needs to ensure the effectiveness and efficiency of facilities services complying with tenant's requests and requirements. Tenants as a representative of end users need to communicate and deliver the end user's need to EnCo. The communication between both parties is a key success factor for facilities service delivery. EnCo, thus, establishes the monthly open forum between EnCo and tenants to discuss and exchange data, information and feedback to improve facilities services and initiate further development. EnCo uses this opportunity to communicate with tenants and vice versa. This meeting not only enables better communication between EnCo and tenants but also allows each party having joint problem solving with other stakeholders such as service providers. Since both EnCo and tenants are PTT's affiliated company, their collaborative relationship could not break apart. They equally share information and have mutually agreed goals to improve and align the acceptable facilities services.

EnCo ↔ End users

End users are not highly dependent on EnCo's management of facilities because EnCo's main responsibility only manages the facilities services within common areas. However, end users still own legitimacy over EnCo because providing an acceptable working environment is the fundamental reason for EnCo's existing. Generally, End users will inform their needs and opinions upon facilities services through their tenants who are responsible for facilities services within their office areas. EnCo has not established the direct communication channel such as open forum between EnCo and end users. The only direct communication channel is the yearly end user satisfaction survey toward EnCo's and CBRE's facility services. Most of

information and collaboration on both ends will be delivered through tenants. Each tenant represents end user's opinions and response back to EnCo. The notion of low interdependence in Frooman's context likely refers to low degree of mutual involvement and information transferring.

EnCo ↔ CBRE

For the short run, EnCo has power over CBRE because EnCo holds the legally contractual agreement upon CBRE. For the long run, however, if EnCo heavily relies on CBRE in all aspects, EnCo would confront with market lock-in situation. EnCo has to pay the high switching cost if EnCo wants to walk away from CBRE contract. CBRE can increase the power of resource control by using external factors for instance, workforce and know-how in property and facilities management. It would create lock-in problem and make EnCo harder to deal with market shifts. CBRE is the single FM provider and own the FM skill and expertise which can cause the contractual difficulty during post contractual agreement phase. It is difficult for EnCo to terminate the contract or find the new potential service providers from the competitive market. That makes EnCo dependents on CBRE for FM services, knowledge and expertise, workforce. EnCo is unable to use other potential suppliers without substantial switching cost. Particularly in Thailand where the FM market is still underdeveloped, there are not many competitive players in the FM market. EnCo needs to find the optimal way to balance FM expertise and knowledge from CBRE and developing its own professional skills. Moreover, according to PTT's job rotation policy, EnCo's employee at the management level would not establish the comprehensive FM professional skill, which represents another challenge for developing EnCo's own FM knowledge and expertise.

EnCo ↔ CBRE's subcontractors

With EnCo's consent, CBRE is allowed to contract out to subcontractors. EnCo does not have the direct contact with CBRE's contractors who provide the commoditized facilities services. EnCo monitors the service outcomes through CBRE's supervision by using tools such as service level agreement (SLA) and key performance agreement (KPI). By the permission of EnCo, CBRE behaves as an ally between EnCo with its subcontractors. EnCo will not be affected significantly, if CBRE's subcontractors break off the contracts.

PROPOSITIONS

This paper investigates how stakeholder's behaviors influence FM strategy. The results show that stakeholder's behaviors impact on the choices of FM strategic decision's making. Stakeholders use their resources to manipulate FM strategy. It can be done directly or indirectly through potential allies. Each stakeholder's behavior identifies the collaborative relationships between FM organizations with its stakeholders in term of their resource dependence on one another and then states which strategy stakeholders would choose to influence FM's decision making.

This leads to formulation of the following four propositions, which are also illustrated in the matrix in Figure 2 based on Freeman (1984)'s earlier mentioned “can affect” and “affected by” criteria:

- Proposition 1: When the relationship is one of low interdependence, the facilities process will be arm's length and the stakeholder will choose the indirect withholding strategy to influence FM.
- Proposition 2: When the relationship is marked by stakeholder power, the facilities process will be market partnership and the stakeholder will choose a direct withholding strategy to influence FM.
- Proposition 3: When the relationship is marked by FM power, the facilities process will be operational partnership and the stakeholder will choose an indirect usage strategy to influence FM.
- Proposition 4: When the relationship is one of high interdependence, the facilities process will be strategic alliance and the stakeholder will choose a direct usage strategy to influence FM.

Figure 2: Stakeholder influenced strategy model (from Frooman to FM context)

FM dependence on Stakeholder	High	Direct/ withholding Stakeholder power Market partnership	Direct/ usage High interdependence Strategic alliance
	Low	Indirect/ withholding Low interdependence Arm's length	Indirect/ usage FM power Operational partnership
		Low	High
		Stakeholder dependence on FM	

From the EnCo case is shown that the relationships between FM organizations with stakeholder are not a hub and spoke wheel, but it is a network of relationships among actors. This suggests that facilities managers should prioritize relationships among them and determine the choices of strategies based on prioritizations. When FM matches the strategic decision with the right relationships, then stakeholders will receive and perceive the added value from the right service delivering.

From the typology, it contends that to deliver the added value facilities services, FM providers do not need to be involved at strategic level. That is the case when facilities service providers offer commoditized services, for instance like OTIS who provides elevator and escalator services to EnCo. However, if service providers offer a high degree of customized and complex facilities services that impact on their focal organizations, then the situation is quite different. For example, in order to provide the added value service to EnCo, CBRE

who is EnCo's main facilities service provider, has to embed into EnCo's core business and involve in EnCo's strategic planning process.

CONCLUSION

This paper proposes an analysis framework to explain and predict FM stakeholders' behavior extended from Frooman's typology. It provides the basic information for strategic decision making on how stakeholders influence FM strategy and each strategic style that stakeholders use to influence FM strategic decision. Better understandings of stakeholders' behavior will incubate the added value delivering to FM stakeholders. The proposed typology introduces a counter intuitive approach to the existing FM literature, arguing that to add value to its stakeholders, FM organization ought to assess their stakeholder's behaviors and how stakeholders influence FM organizations against with their delivering services. As stated in the introduction, understanding how stakeholders influence FM strategy is indeed a crucial responsibility for facilities managers in the strategic planning process. This insight allows FM practitioners to understand the stakeholder's behavior as a starting point to determine the right strategic decision.

This paper investigated the proposed framework with only one FM organization which does not encapsulate other variables such as business context, culture, strategic choice, size of organization, management style. The proposed theory is a static framework that cannot encompass the actual strategy as an event unfolds. For the future research, the author aims to testify the validation of this proposed model in different settings as described.

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The Concept of Intra-Organizational Corporate Social Responsibility for Facilities Management

ABSTRACT

To succeed in today's turbulent market, the facilities management (FM) industry needs a much stronger focus on the needs and wishes from the demand side. In many cases this means being more efficient and effective in delivering the requested services, but interestingly it may also mean to be more socially responsible in FM practice. Corporate social responsibility (CSR) is a notion of managerial virtue that has been around for quite some time in general management, but now it is also becoming increasingly relevant to FM due to changes in client demands, society at large and regulations. By extensive literature review this conceptual paper aims to demonstrate how FM practitioners can embrace the CSR principle by discussing the state of the art of CSR in this industry, arguing that CSR practices should not be considered as just another management buzzword, but as an important vehicle for corporate development and social changes. Because of the dual roles of facilities end users people who perceive facilities services and citizen who are the stakeholders this paper proposes the concept of intra-organizational CSR (IO-CSR) by internalizing the primary stakeholder of a CSR issue from society at large to facilities end users and FM staff.

Keyword: Facilities management, Corporate social responsibilities, Sustainability, Intra-organization, Support activities

INTRODUCTION

It is a cliché and inevitable for corporate social responsibility (CSR)-related articles to articulate the substantial imperatives of CSR for businesses as “the reason for being” of the firm. It is a symbiotic relationship between business and society. However, many studies (Porter and Kramer, 2006, Jenkins, 2009) show that the CSR performance of the firm and its impacts on society are superficial, disconnected, fragmented and non-effective. For the facilities management (FM) industry, the CSR issue increasingly draws the attention of FM academia and practitioners. For the private sector the FM organizations act as the noncore part of the firm’s supply chain. It is not directly required for social responsibilities from FM’s parent organization through external stakeholders. The reason is that FM value chain mainly involves in intra-organization rather than inter-organization.

Nevertheless, for some sectors where FM is an integral part and core resources of the business such as hospital, airport and concert halls (Nutt, 2004), the impacts of FM performance and services toward its stakeholders and surroundings would be greater than sectors where the FM function is non-core activities.

From the technical perspective an FM service is not a fast-changing business. FM organization as a support service is not spotted in CSR limelight compared to the dynamic core business of the corporation which often draws attentions from media, local community, law and society at large. The provision of facilities services also needs to be flexible and proactive (Salonen, 2004). Due to the changes in client demands, society at large and regulations, this paper argues that taking on CSR is not a question of whether “to be or not to be”, but of how CSR should be addressed and incorporated in FM practices effectively and efficiently.

This paper proposes the concept of intra-organizational CSR (IO-CSR) for FM to practice CSR strategically. This concept provides a better understanding of implementing or adapting CSR in the FM context, addressing CSR opportunities from the FM value chain and pointing out the advantages. When considered strategically CSR can become a source of social progress, as FM is one of the corporation’s supports, applying its considerable resources, expertise, and insights to activities that benefit society (Porter and Kramer, 2006).

This research uses the following definitions to delineate the demarcation problem and discussions that focused on facilities services for the private sector in a current business environment:

- Facilities management company (FMC) is used as a common term for facilities owner, facilities manager and facilities service providers (Nousiainen and Junnila, 2008) because the end-users are likely to perceive them as one entity when it is applied to the CSR issue.
- There are widely prolific CSR definitions but for this inquiry corporate social responsibility (CSR) refers to an action that appears to embrace responsibilities further some social good, extends beyond the explicit interests of the firm, and is not required by law (McWilliams and Siegel, 2001). It impacts the firm’s activities on the environmental aspects and internal and external stakeholders.
- Internal stakeholder here refers to direct FMC’s end users and FMC’s employees.

- External stakeholder is used to describe indirect FMC's end users, local communities and all other members in the public sphere.

WHAT IS CORPORATE SOCIAL RESPONSIBILITY (CSR)?

Clearly, there is no universal agreement on CSR. CSR is an “umbrella” term, incorporating the tenets of environmental sustainability, business ethics, governance, public relations, stakeholder analysis and relationship marketing (Barthorpe, 2010). In short, CSR encourages corporations to consider the impacts of their activities upon society and environment. In the CSR context, corporation's responsibilities are not only showing profit to their shareholders but also minimizing their environmental impacts and enhancing social equity to their stakeholders.

According to the vague and ill-defined definitions the principle of CSR is subject to interpretative viability, both theoretically and practically. Theoretically Carroll (1999) shows that CSR are defined by academic literature in more than 25 different ways. Taken together, Godfrey, *et al.* (2010) conclude that the definitions among practitioners proliferate as well, with groups such as the World Business Council and the United Nations offering their own definitions. Practically Margolis and Walsh (2001) categorize more than 90 empirical studies, hoping to establish a link between CSR implementation and improved financial performance. However, they concluded that the evidence was inconclusive.

Consequently, CSR is faced a dilemma at the corporate boardroom where an executive initiates in CSR exhibiting in a wide range of discretions. However, there are two powerful conceptualizations widely seen in CSR practices:

Firstly, the so called “from the heart CSR” or philanthropy CSR which aims to provide the charity deeds without- focusing on any clear business or “bottom line” gain (Cochran, 2007). Nonetheless, Jenkins (2009) shows that because of the rhetoric philanthropic CSR statement, it never aligns with the reality. Jamali (2007) and Porter and Kramer (2006) affirm that most often, philanthropic contributions are distanced from business goals, undermining impact and value added.

Porter and Kramer (2006) also assert that oftenthe result is a hodgepodge of uncoordinated CSR and philanthropic activities disconnected from the company's strategy that neither make any meaningful social impact nor strengthen the firm's long-term competitiveness”. Further, they point out that internally, philanthropy CSR practices and initiatives are often isolated from operating units and even separated from corporate philanthropy. Externally, the company's social impact becomes diffused among numerous unrelated efforts, each responding to a different stakeholder group or corporate pressure.

Secondly, strategic CSR is the effective alignment of philanthropic contributions with business goals and strategies, thus allowing the reconciliation of social and economic benefits (Jamali, 2007). Porter and Kramer (2003) also suggest that if a firm has no competitive advantage in a given philanthropic area, it is likely that any investments. It makes in that area will have little to no long-run impact.

Porter and Kramer (2006) describe the concept of strategic CSR as a practice that corporations should approach their social equity for social responsibility by using the same managerial skill and practice that guide their core business. This concept of strategic CSR is corresponding with “sticking to your knitting” business strategy (Peters and Waterman, 1982) that businessmen should focus on their core competencies and not be distracted by other apparently interesting opportunities in which they have less expertise or knowledge. When systematically pursued, strategic CSR will allow corporations to enhance their business opportunities, added value and competitive advantage whilst unlocking a vastly more powerful way to make the world a better place (Porter and Kramer, 2003).

COMMON BARRIERS TO EFFECTIVE IMPLEMENTATION

As mentioned above, implementing CSR is a matter of choice. CSR implementation in FMC is driven by demand from clients and end users. FMC practitioners passively respond to this demand to insulate themselves from external pressures. The research by Nousiainen and Junnila (2008) shows that in large international companies, FMC is expected to provide facilities services supporting environmental management, which is one of the three pillars of CSR for their customers. The two other pillars, economic and societal, are left out. FMC practitioners then tend to consider CSR as a default realm focusing on the tension between business and society in lieu of their interdependence (Porter and Kramer, 2006).

For FM academia, Alexander and Brown (2006) shed much needed light on CSR in FMC to retain its relevance as a profession, strengthen its position and maintain its influence (Alexander, 2003). However, their ripple effect somewhat penetrates with little regard to operational facilities services in practice. What are the glass ceilings imposed between the CSR principles and the FMC in practice?

1. Top-down approach CSR

With its positioning on the supply side, FMC service is responsive to the demand side from clients and end-users including CSR initiatives. Typically, a given CSR initiative comes from the strategic level, the so-called top-down approach. More often, the CSR initiative in FMC has confined to limited areas, nothing more than a public relation (PR) campaign or a glossy report because the management level perceived CSR as a moral burden. There is no or unclear CSR strategy built into the corporate strategy or tactical and operational levels.

Although, in the short run, this claim, “the link of CSR and its financial benefit”, is unproven, CSR would not be implied as a business threat and cost constraint, either. Studies examine that on the long run CSR could provide significant scope for competitive advantage (Jenkins, 2009, Porter and Kramer, 2006, Tilley, 2003). Realistically, decision-making authorities are simply acquired for additional benefits of CSR information and/or knowledge. The management level needs to decentralize its authority and invite its staff from other levels to participate in CSR initiatives. With this broader sense, FMC can behave as a change agent to flip another side of the coin by proposing and communicating facilities based CSR opportunities. The search for CSR opportunities will be discussed in the next section.

2. FMC's focus is too narrow

CSR issues are increasingly drawing attention from FM academia and practitioners. In contrast, the existing focal point of CSR practice in FMC is focused on the externally organizational value chain. Mostly, it is required from end users emphasizing on the key environmental objectives, for example, energy consumption, waste minimization and recycling, and reduction of climate change emissions (Nousiainen and Junnila, 2008).

As Matt Dalton, former chair of the British Institution of Facilities Management (BIFM)), concedes that in most company's reports around 40 to 50% of CSR comes from FMC (Prickett, 2006). He also added that the report is concerned in terms of energy, waste management, health and safety and such social issues as maintaining forests and ensuring ethical treatment among supplies or travel.

On the other hand, Carder (2006) contends that there is a wider role for facilities managers; the FMC's contribution to CSR is often seen to be enclosed in its role only for reducing environmental aspects, improving energy performance and reducing waste. On the other hand the other opportunities are disregarded, for instance, the well being of end-users or FMC staff in terms of work-life balance, which can be the possibility for the CSR agenda in FMC context. Companies need their employees to be strong advocates of a CSR strategy, employment policies and products. If FMC staff are valued, they will be more motivated and committed to delivering a good service to customers (Carder, 2006).

3. Lacking of communication between FMC and its stakeholders

FMC's primary stakeholders for CSR implementation are their end users and other business units. Good communication between FMC and their stakeholders will reinforce the effectiveness of CSR initiatives. When end users recognize a CSR effort, they would value CSR initiatives. To substantiate the CSR agenda, FMC needs to communicate and collaborate with other business units which support the organization's primary activities, such as human resource (HR) and procurement.

However, from the research of Nousiainen and Junnila (2008), it indicates that in general, FMC has not actively marketed their capabilities of their environment management activities to the end-users. The results also indicate that end-users do not collaborate or communicate with FMC on environmental management policy or to other business units. End-users do not seem to know much about what facilities service have been taken to improve the environmental performance of buildings, and neither do they seem to have knowledge about the facilities' own environmental management policy. Most likely this communication problem implies that FMC has not been adequately proactive in communicating their environmental policies and actions. Solutions to this communication problem should be sought.

4. The failure of CSR performance measurement

FMC is usually categorized under support services and CSR in FMC is not directly ranked as a FMC's primary task. There is no practical or explicit managerial tool or framework for FMC to implement and

measure CSR performance systematically. This makes it difficult to assess exactly how the FMC are performing in CSR (Prickett, 2006). Subsequently, FMC executes CSR initiatives without clear direction, unclear about what and who to focus on. As a result, the CSR framework is not engaged with its FMC core activity.

In general, the widely used CSR indicator such as FTSE4 Good Index and Dow Jones Sustainability Indexes were established when sustainability generally meant environmental issues. It was not designated to evaluate the other aspects such as economic and societal aspects (Prickett, 2006). Porter and Kramer (2006) also criticize that those indicators use the size of a company's board as a measure of community involvement, even though size and involvement may be entirely unrelated. Finally, even if the measures chosen accurately reflect social impact, the data are frequently unreliable.

Most ratings rely on surveys whose response rates are statistically insignificant, including self-reported company data not being verified externally. Companies with the most to hide are the least likely to respond. The result is a jumble of largely meaningless rankings, allowing almost any company to boast that it meets the measurement of social responsibility.

There are increasing pressures for environmental reporting and for organizations to demonstrate their environmental credentials, which present a good opportunity for organizations to attain a competitive advantage while differentiating themselves in the marketplace (Walker *et al.*, 2007).

Walker *et al.* (2007) concedes that increasing awareness of the environment from customers and their demand for information also pressure FMC organizations to change their approach to environment management. This issue presents a significant opportunity for the FM profession to assume a key role in embracing the beyond self-seeker culture, and implement the necessary policies and procedures required to effectively demonstrate an organization's environmental stewardship (Shah, 2004).

INTRA-ORGANIZATIONAL CORPORATE SOCIAL RESPONSIBILITY (IO-CSR)

The conventional approach of CSR is based on the assumption that large companies are the norm and have been predominantly developed for large corporations (Jerkins, 2004). End users are overlooked by FMC and its organization. According to the primary role and responsibility of FMC, FMC needs to achieve agreed services which support and improve the effectiveness of its corporation's primary activities (CEN/ TC 348, 2006). Facilities activities are perceived by end users in term of usability of facilities services or beneficiary aspect. FMC practitioners view their end users only as the people who receive facilities service but not citizens who are affected by or can affect what FMC does.

This paper proposes the concept of intra-organizational CSR (IO-CSR) for FM organization. It differs from a conventional top-down approach, where CSR is based on the assumption that FMC is exclusively established as another entity implementing CSR within its host company. Based on this framework, as shown in figure1, the unit of analysis will be limited within corporate level and its business units rather than societal level.

In this context, the primary stakeholder role will be restricted from external stakeholders such as society at large to an internal stakeholder role such as facilities end users and/or FM staff. The impacts of CSR will mainly focus on the FM value chain instead of corporate value chain. Primary stakeholders are facilities end users, FM staff, suppliers who interact within the FM value chain and its organization.

The return for CSR practice can be non-financial benefits such as trust and commitment between the FM organization and supplier, employee loyalty and satisfaction toward the host organization. Conventional CSR collaborates either with external partners or internal business units, but IO-CSR allies with other business units such as human resource, marketing and operation. The main difference of conventional practice and IO-CSR are shown in Table 1.

The significant differences of conventional and IO-CSR activities are the degree of centrality and specificity of CSR practice. Husted (2003) suggests the definitions of centrality and specificity as:

Centrality refers to CSR activities associated with its organization's core expertise and competency. High centrality occurs when CSR practices are closely related to the core competency, and low centrality occurs when CSR practice is irrelevant to the core activities and expertise.

Specificity is dependency between organizations that generate the CSR activities and receivers who benefit from CSR activities. High specificity is when the receiver and organizations are highly dependent on each other, and low specificity is when less dependency among the entities.

Table 1: Differences between conventional and IO-CSR practice

Dimension	Conventional CSR	IO-CSR
Scope of analysis	Societal level	Corporate level
Value chain	Corporate value chain	FM value chain
Primary stakeholder/ Recipient	External stakeholders	Internal stakeholders
Impact	External organization	Internal and external organization
Return on CSR practice	Non-financial and/or indirect financial benefits	Non-financial benefit
Partnership	External allies or other business units	Other business units
Centrality	Low	High
Specificity	Low	High
Investment cost	Low	High

The impacts of FM activity upon environment and society can be generalized into four main areas based on Nutt's four trails for the future of FM, (Nutt, 2004). The four areas are human resource (people), knowledge (information), financial (business) and physical (property). FMC is identified as the crucial link, assisting in

developing appropriate knowledge management systems necessary for attaining continued business success (Walker *et al.*, 2007).

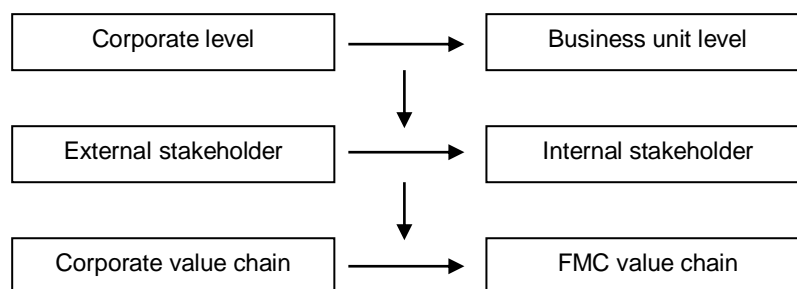


Figure1. Scaling down the unit of analysis

Why does FMC have the competitive position to drive the IO-CSR agenda? In order to execute this concept, a corporate must have an internal champion who drives this agenda. Even though in a large company, Jerkin (2009) asserts that top-tier managers may support CSR, but it is usually driven by champions at the middle tier working in such departments as human resources (HR) or external relation. In parallel, Moss (2010), Waheed and Fernie (2006) suggest that FMC's competitive position can look through the whole organizational process and value chain. FMC is categorized in a middle management level that translates strategic needs into practice and provides the effective and efficient support from the day-to-day operational level. Moreover, due to FMC's positioning, FMC can align the discrepancy of CSR performance between strategic decisions and the day-to-day basis operations. This FMC advantage sought out not only monitoring the CSR practice for the corporation as a whole but also generating CSR from its processes and activities (Napper, 2003 as cited in Walker, D *et. al.*, (2007)). By doing this, FMC basically has to have a basic understanding of the value chain of FMC and its host organization. FMC can take this advantage to investigate points of intersection between its value chain and the firm's value chain (Waheed and Fernie, 2009).

PROPOSITION FOR FACILITIES MANAGEMENT IMPLEMENTATION

How can FMC practitioners embed intra-organizational CSR into their day-to-day basis operation rather than as a one-off decision making? Although CSR is designed mainly for large corporations (Jenkins, 2009), much of it would apply equally to FMC as well. The study (Jerkin, 2009, Porter and Kramer, 2006) shows that a key success of implementing CSR is to identify key stakeholders and prioritize key areas where the company can really make a difference.

Stakeholders can be crucial to business performance, and engaging with stakeholders is crucial for capitalizing on specific business strategies designed to exploit possible CSR (Grayson and Hodges, 2004). One way to engage FMC more effectively in CSR is to demonstrate how it can achieve added value and competitive advantage through realizing and maximizing the opportunities presented by CSR (Jerkin, 2009).

This paper introduces four propositions that build on strategic CSR practice and stakeholder management literature (Porter and Kramer, 2006; Freeman, 1984). Strategic CSR framework created by Porter and Kramer (2006) is likely to be the most practical framework to implement effective and meaningful CSR, which emphasizes the intersections between primary activities of organizations and their social impact.

Proposition1: Mapping the interconnection between corporate value chain and FMC value chain

It might be too limited to investigate societal impacts solely from outside, but most organizations do. Basically, a facilities manager is an individual who understands the process and is the key person that needs to be involved in the process and the resources needed. He / she understands the needs to evaluate and re-evaluate the FM processes and its results (Moss, 2010). Hence, FMC possesses the competitive position that FMC can see the opportunity from the operational level as a frontline service provider and correspondent for the needs of a strategic level and end users.

FMC is able to associate CSR initiatives within a FMC value chain instead of an external organization value chain. Taking the view of interconnections between corporate value chain and FMC value chain, the primary stakeholder can switch from external stakeholders to internal stakeholders. External stakeholders refer to society at large who involve in the organization at the corporate level. Internal stakeholders refer to the FMC's end users and FMC's staff such as service provider, facilities manager and facilities employee at the operational level. This may often involve overcoming any challenging aspects of CSR by being innovative, flexible and seeking market-driven opportunities, which, at the same time, addresses important societal and environmental conditions (Jenkins, 2009).

Proposition 2: Identifying primary stakeholders' salience

As if CSR is not based on FMC professional skill and expertise for instance providing charity needs to local community or after school education, it would be just another mediocre CSR effort. Porter and Kramer (2006) suggest that a firm should approach CSR as its built-in core business strategy. Addressing social issues by creating the shared value among FM, firm and surrounding, CSR should become a core activity rather than added- on activities. Grayson and Hodges (2004) assert that integrated CSR can be seen as corporate social opportunities for firms, which not only achieve added value but also strengthen competitive advantage of the firm (Porter and Kramer, 2006).

Applying Porter and Kramer (2006)'s view, FMC must integrate a social perspective into the core frameworks in order to understand demands and guide its FMC processes and activities. This involves setting down the values and principles of the business, a task usually led by facilities managers posited as a competitive position, and building the FM's practice around this vision.

What is FMC core competency? In accordance with the fundamental responsibility of FMC "providing the effective workplace", it focuses on increasing the productivities of organizational primary activities. CSR can be targeted efficiently, and potential societal interactions may emerge from this process. For example, FMC can initiate CSR in a workplace that promotes the work- life balance and social welfare for employees of both

FMC's department and FMC's host company. FMC can provide excellent training and development opportunities (Jerkin, 2009) from organization infrastructure and facilities services, which attract and retain high qualification employees. Moreover, the attributes of relationship among FMC's employees can be a source of CSR initiative as well. Collaborative relationship such as commitment, mutual trust, openness and promise of mutual benefit (Lehtonen, 2005) that are co-value creation among FMC's employees, is incumbent to create the firm's added value and competitive advantage.

Proposition 3: Collaborating with other organizational support units

FMC clearly plays a central role in gathering and managing a wide range of information, especially with regard to the environment (Walker *et al.*, 2007). However, looking at FMC solely as a single support service might be not enough. It should be looked at as a wide array of organizational support services. Taking Nutt (2006)'s view of infrastructure service (IS) for example, he suggests that facilities services working together with other support services, such as information system (IT) and HR will provide a more comprehensive platform for implementing CSR and strengthen its impact.

However, at the practical level, the potential of FMC has not yet been well utilized due to the lack of communication and understanding among parties, FMC and its end users (Nousiainen and Junnila, 2008). FMC is encouraged to be more proactive in marketing and communicating its capabilities to end-users and its stakeholders to raise the awareness of societal benefits from FMC. Communication is a crucial element to achieve an effective CSR implementation.

Carder (2006) suggests that one of the many challenges for FMC is to bring this evidence of its contribution to business performance. It requires facilities managers to be "bilingual" speaker, speaking both business and technical languages (Carder, 2006). Moss (2010) suggests that a facilities manager is already at the interface between end-users and the supply-chain by enquiring end-users requirements then matching them with best value services. He/ she is also the translator of the organization's strategic objectives into operational requirements for the FMC services. And, he/ she can also communicate well with other support services within the organization in order to implement the new processes and agenda.

Proposition 4: Embedding in day-to-day operations

FMC should revise and reinvent a new CSR business model. By placing social responsibility at the core of daily operations, CSR becomes less of an "add-on" and more "just the way FMC do things". Jenkins (2009) stresses that a CSR strategy has to be embedded in all aspects of FMC operation and not be seen simply as a costly externality. CSR is not an optional "bolt-on" to FMC core activities – but embedded into its business processes. One step further, FMC and its peer support services will also make a significant contribution in attaining a competitive advantage for their parent organizations. It also seems to offer promising potential for creating new business opportunities by developing appropriate facilities services (Nousiainen and Junnila, 2008). There is a significant opportunity for the FMC profession to assume a key role in embracing the CSR culture (Walker *et al.*, 2007).

CONCLUSION

To practice effective CSR, FMC has to customize its own tailor-made CSR practice. With the status quo of CSR in FMC, it has been swept into one single area-environment issue, which is demanded by clients and end-users. Those one-size-fit-all CSR demands may or may not directly tie in the FMC value chain. As a consequence, it leads to add-on FMC activities and demand-driven CSR initiatives which would not generate a significant societal impact as expected.

The above four propositions attempt to be a structured assessment tool for FMC practitioners and academia to assess and identify the CSR possibilities and practices. This paper suggests that FMC practitioners should broaden the roles of facilities end users. Facilities end users should not be seen as only the people who passively perceive facilities services but also the citizens who are socially influenced by or can impact facilities service. With this systematic framework, FMC can implement effective CSR initiatives through its primary stakeholders more than the conventional approach. FMC then should scale down the unit of analysis from corporate value chain to FMC value chain, from external stakeholders to internal stakeholders and from corporate level to business unit level. With the smaller scope of analysis, CSR performance must be built within the internal FMC processes and its value chain. Consequently, FMC is able to echo the CSR ripple effect to its targeted stakeholders and society substantially. This FMC's contribution can be a source of added value and competitive advantage for its host organization in turn.

This framework is constructed solely from the literature review. For future research, these four propositions will be tested via selected case studies to reveal the limitations and practical implications of this framework.

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Blue collar FM workers as a primary stakeholder: A case study of CSR practices

ABSTRACT

Purpose: The paper aims to present how facilities management (FM) organizations can implement intra-organizational corporate social responsibility (IO-CSR) with their partners such as other business units and facilities service providers. It also seeks to investigate how an IO-CSR practice contributes added value to stakeholders and its host organization's core business.

Design/Methodology/Approach: The concept of IO-CSR - "implementing CSR within FM value chain" - is put forward in this paper. This concept development is exemplified through a case study of a Thai energy company, PTTEP. Data collection was carried out through qualitative interviews with three facilities managers involved in FM strategic decision processes and document analysis.

Findings: The paper provides evidence of the impacts of IO-CSR practices in FM on a host organization's core business by identifying FM blue collar workers as a primary stakeholder. IO-CSR requires strong collaboration between the FM organization, human resource (HR) and facilities service providers. The results show that when FM blue collar workers are considered as the primary stakeholders, PTTEP can reduce the rate of employee turnover and retain the skilled and trusted employees.

Practical implication: Selecting primary stakeholders and finding the right partners are the key success factors for effective IO-CSR implementation. When the IO-CSR concept is embedded within an entire organization, the IO-CSR practices will create significant impacts to selected primary stakeholders and an organization's core business.

Research limitation/Implication: Data were only collected from a top management level side. For the further development, the semi-structured interviews have to be conducted with front line blue collar workers and end users, to understand how they perceive the contributions/ added value from an IO-CSR initiative.

Originality/Value: The paper provides insights into the extant FM literature. Practicing IO-CSR in FM creates added value to an organization's core business and stakeholder. It allows facilities managers framing the basis understanding on how to determine the stakeholder influenced FM strategy.

Paper type: Case study

Keywords

Facilities Management, Outsourcing, Human Resource, Corporate Social Responsibility

INTRODUCTION

The author believes that a relationship between corporations and society is a symbiotic relationship. Corporations could not run, operate, maintain and sustain their businesses without society and surrounding supports. Corporations must contribute social goods back to them in turn, starting from the basic necessities such as law compliance, paying tax, job employments to offering “something” beyond the legal requirements – so-called Corporate Social Responsibility (CSR). In this paper CSR is seen as an instrumental approach to create wealth for the shareholders without a financial motive, a businessman mere interest. This paper offers a win-win approach where creating the competitive advantage to the corporation while contributing social good to the surroundings. In this context CSR will be treated as a mean for Facilities Management (FM) to add value to its stakeholders. To implement CSR initiatives, corporations will not invest without causes. In the private sector the cause is return on investment (ROI), and this is the main reason why researchers attempt to find the connection between performing CSR and economic benefits. It can be the motive for establishing a CSR scheme within the business strategy. However, there is no quantitative evidence proof.

As Burke and Lodge (2006) state, when philanthropic activities are closer to the company’s mission, they create greater wealth than other kinds of donations. Social investment in a competitive context: Porter and Kramer (2002) argue that investing in philanthropic activities may be the only way to improve the context of competitive advantage of a firm and usually creates greater social value than individual donors or government can. The reason is that the firm has the knowledge and resources for a better understanding of how to solve some problems related to its mission.

This paper proposes the concept of IO-CSR and supplements with exemplary case studies and discusses why FM should implement CSR activities within its organization and supplements with an example from an internal CSR practice from Thai Energy Company.

This company practices CSR within its organization through its FM blue collar workers. The FM blue collar worker refers to FM frontline employee who works at the operational level in a FM service such as reception, cleaning, mail, technical operation and maintenance, catering and security. Frontline employees impact the operational efficiency, productivity effectiveness and customer satisfaction of end users in an FM context.

The remainder of this paper is structured as follows. Section 2 reviews current practices of CSR and the proposed concept of IO-CSR practices. The last section will present the case study to illustrate the concept.

CURRENT PRACTICES OF CORPORATE SOCIAL RESPONSIBILITY (CSR)

CSR is an umbrella concept that encourages corporations to voluntarily consider the impacts of their activities upon society and environment. Because of voluntary activities CSR practices are likely to be fragmented and disconnected from the corporation’s expertise and competence. Corporations execute CSR in a wide range of discretion. However, there are two powerful conceptualizations widely seen in CSR practices:

Firstly, philanthropy CSR aims to provide the charity deeds without focusing on any clear business or "bottom line" gain (Cochran, 2007). Nonetheless, Jenkins (2009) shows that because of the rhetoric philanthropy CSR statements it never aligns with the reality. Jamali (2007) and Porter and Kramer (2006) affirm that most often philanthropic contributions are distanced from business goals, undermining impact and value added. Porter and Kramer (2006) also assert that the result is often times a hodgepodge of uncoordinated CSR and philanthropic activities disconnected from the company's strategy that neither make any meaningful social impact nor strengthen the firm's long-term competitiveness. Further, they point out that internally philanthropy CSR practices and initiatives are often isolated from operating units and even separated from corporate philanthropy. Externally, the company's social impact becomes diffused among numerous unrelated efforts, each responding to a different stakeholder group or corporate pressure. Branco and Rodrigues (2006) call this practice as outsourcing CSR the company's involvement in the management of the project is usually minimal. The donor and recipient have a high ability to adapt independently to unforeseen contingencies because the donor is able to switch funding from one recipient to another depending on current need and changing social trends. Administrative controls over the recipient are low because the donor company is unable to evaluate the non-profit recipient's employees or systems to ensure that the recipient is fulfilling the CSR activities as agreed. A company can direct resources to those community and other social organizations that are experts in the particular problem at the hand. Porter and Kramer (2003) also suggest that if a firm has no competitive advantage in a given philanthropic area, it is likely that any investments it makes in that area will have little to no long-run impact.

Secondly, strategic CSR is the effective alignment of philanthropic contributions with business goals and strategies, thus allowing the reconciliation of social and economic benefits (Jamali, 2007). Porter and Kramer (2006) describe the concept of strategic CSR as a practice that corporations should approach their social equity for social responsibility by using the same managerial skill and practice that guide their core business. When systematically pursued, strategic CSR will allow corporations to enhance their business opportunities, added value and competitive advantage while unlocking a vastly more powerful way to make the world a better place (Porter and Kramer, 2003). This is in line with Husted (2003) classifying CSR approaches that are closer to the core competency and higher degree of mutual involvement between the company and its recipients as in-house CSR and collaborative CSR.

In-house CSR refers to a firm that allocates financial and other resources through an organizational unit within the firm. Many in-house projects focus on employees as the internal "consumer" or stakeholder benefiting from the CSR activities. In each case companies design, develop and execute the in-house CSR project alone, without the assistance of outside non-profit organizations. Firms can strategically plan, design and execute target resources to meet specific company and community needs. Branco and Rodrigues (2006) suggest that in-house an CSR project requires corporate involvement that goes beyond the donation of money or goods. The firm plans, executes, and evaluates the CSR project, and since these projects are developed within the organizational structure of the firm, they are subject to all of the advantages and disadvantages of organizational hierarchies. Cooperation within the firm is high because the recipient is a unit within the firm that submits to the same authority structure.

Another type of strategic CSR concept is collaborative CSR which refers to the situation where firms become a partner with a non-profit organization and in which the firm transfers resources to the non-profit partner in order to carry out CSR activities jointly. The firm and its non-profit partner plan, design, and execute resources to the development and implementation of the CSR program.

A CONCEPT OF INTRA-ORGANIZATIONAL CORPORATE SOCIAL RESPONSIBILITY (IO-CSR)

The impacts of FM activity upon environment and society can be generalized into four main areas based on Nutt's four trails for the future of FM, (Nutt, 2004). The four areas are human resource (people), knowledge (information), financial (business) and physical (property). Arguably, the FM organization which is a support function of a given organization should not practice a conventional CSR practice as mentioned above.

The conventional approach is designed for a corporation's activity and its impact on the environment and society at large. In contrast, the impact of FM performance and operation upon societal and environmental issues are mainly limited within its client organization.

Therefore, this paper proposes the concept of intra-organizational CSR (IO-CSR) which is designed for organizational support functions such as the FM organization. IO-CSR differs from the conventional approach, therefore this approach is based on the assumption that FM strictly acts as another small company implementing CSR within its host company. Based on this assumption the unit of analysis will be limited within corporate level and its business units rather than societal level.

In this context, the primary stakeholder role will be restricted from external stakeholder such as society at large to an internal stakeholder role such as facilities end users and/or FM staff. The impacts of CSR will mainly focus on the FM value chain instead of corporate value chain. Primary stakeholders are facilities end users, FM staff, suppliers who interact within the FM value and its organization.

The return for CSR practice can be non-financial benefit such as trust and commitment between the FM organization and supplier, employee loyalty and satisfaction toward the host organization. Conventional CSR collaborates either with external partners or internal business units, but IO-CSR allies with other business units such as human resource, marketing and operation. The main difference of conventional practice and IO-CSR are shown in Table 1.

The significant differences of conventional and IO-CSR activities are the degree of centrality and specificity of CSR practice. Husted (2003) suggests the definitions of centrality and specificity as:

Centrality refers to CSR activities associated with its organization's core expertise and competency. High centrality occurs when CSR practices are closely related to the core competency and low centrality occurs when CSR practice is irrelevant to the core activities and expertise.

Specificity is dependency between organizations that generate the CSR activities and receivers who benefit from CSR activities. High specificity is when the receiver and organizations are highly dependent on each other and low specificity is when less dependency among the entities.

This paper systematizes a discussion of the concept of IO-CSR practice by a common used management tool, SWOT analysis. It is a strategic planning tool used to evaluate the strengths, weaknesses, opportunities, and threats involved in implications and limitations of IO-CSR. This SWOT analysis involves specifying the objective of IO-CSR and identifying the internal and external factors that are desirable to achieve that objective.

Table 1: Differences between conventional and IO-CSR practice

Dimension	Conventional CSR	IO-CSR
Scope of analysis	Societal level	Corporate level
Value chain	Corporate value chain	FM value chain
Primary stakeholder/ Recipient	External stakeholders	Internal stakeholders
Impact	External organization	Internal and external organization
Return on CSR practice	Non-financial and/or indirect financial benefits	Non-financial benefit
Partnership	External allies or other business units	Other business units
Centrality	Low	High
Specificity	Low	High
Investment cost	Low	High

Strength (internal factor): IO-CSR practice is engaged within a FM practice and core competence which centralizes to the core business. The FM organization can manipulate, plan, invest and execute resources purposefully. Results can be evaluated and measured by a firm itself. The internal benefits help a firm to develop new resources and capabilities that are related to know-how and corporate. However, regarding some of these internal benefits, whether the behaviors and outcomes are disclosed to outside constituents, is largely irrelevant to the development of internal resources and capabilities and organizational efficiency (Orlitzky et al, 2003). In order to generate the sustainable competitive advantages FM organizations do this by effectively controlling and manipulating their resources and/or capabilities that are valuable, rare, cannot be perfectly imitated, and for which no perfect substitute is available. These resources and capabilities acquired internally would then lead to more efficient use of resource.

Weakness (internal factor): the FM position is invisible to the top management. Typically, a given CSR initiative comes from a strategic level, the so-called top-down approach. More often, CSR initiatives in FM limit themselves into narrow areas noting more than PR campaign or glossy reports because the management level perceives CSR as a moral burden. Therefore, there is no or unclear CSR strategy built in the corporate strategy, tactical and operational. Without senior management consent IO-CSR initiative would not succeed. A good communication between FM and their stakeholders will reinforce the effectiveness of the CSR initiative. When end users recognize a CSR effort, they would value the CSR initiative. To substantiate the CSR agenda FM need to communicate and collaborate with other business units which

support the organization's primary activities such as HR and procurement. Branco and Rodrigues, (2006) suggest that the internal CSR practice costs high administrative control when compared to external practice because firms have to execute CSR from planning to evaluation itself.

Opportunities (external Factor): IO-CSR creates indirect effects on the FM's host corporate reputation by attracting new employees, thus enhancing corporate brand. This FM-related CSR activity can create the competitive advantage from CSR because it is still unique, rare but not hard to imitate. Mike Dalton, former chair of the British Institution of Facilities Management (BIFM), concedes that in most company reports around 40-50% of CSR comes from FM (Prickett, 2006). He also added that the report is concerned with environmental issues like energy, waste management, health and safety and such social issues like maintaining forests and ensuring ethical treatment among suppliers or travel. Those FM-related external CSR contributions can be used as a communication tool between FM organization and top management.

Threats (external Factor): The IO-CSR concept is an internal practice within FM core competency and expertise. Corporation and FM organization can receive pressures from the external stakeholders such as local communities, media, and NGO who have stakes in corporate activities because most of the CSR benefits are directed to the internal receivers. For example, CSR performance evaluation is a self-assessment. It causes the unreliable result and evaluation.

In summary, effective communication is the key success factor to implement IO-CSR for both internal and external FM organization. Internally, the FM organization has to collaborate with other businesses and top management from planning to evaluation. Externally, FM together with its host organization needs to communicate the results and impacts to the external stakeholders.

CASE PRESENTATION

Data collection was carried out through semi-structured interviews with 3 managers involved in FM strategic level and 1 in tactical level and supplemented with document analysis. The interview duration was approximately 1-1.5 hours. Interviewees implicitly stated and/ or claimed their practices are CSR initiatives but rather perceive as business continuity performing to ensure compliance with the service level agreement and prevent workforce shortage.

PTT is a Thai state-owned energy company. It owns extensive submarine gas pipelines in the Gulf of Thailand, a network of liquified natural gas (LPG) terminals throughout the country, and is involved in electricity generation, petrochemical products, oil and gas exploration and production, and gasoline retailing businesses. PTT is one of the largest corporations in the country and it is also the only company from Thailand listed in the Fortune Global 500 companies and ranks 118 among top 500 companies in the world and 25th in Asia.

PTTEP (PTT Exploration and Production) is a subsidiary PTT operating oil exploration and production which is a core business of PTT. The scope of work covers South East Asia, Oceania, Far East Asia, Middle East, North Africa and North America. There are 2,000 on shore employees and 1,600 off shore employees. The

scope of analysis in this paper is in a 46,000 sq. m. headquarters office building in Bangkok housing 2,000 employees. PTTEP occupies eighteen floors in the ENCO building in Bangkok, consolidating functions previously spread across a number of Bangkok locations.

The introduction of a dedicated client floor, and a separate executive suite accommodating all management facilities enabled PTTEP to maximize the general workplace facilities.

PTTEP's office shares common areas such as main reception, parking lot, main elevator and catering with other PTT's subsidiaries companies. For PTTEP office space PTTEP manages its own facilities service and provision by contracting out to third party providers. Breakout and hub spaces are situated adjacent to stair landings to encourage staff interaction. Utility rooms are located around the central core ensuring that work space areas are positioned with close proximity to natural light. This open plan approach is a significant change for PTTEP and has strengthened the culture of the company.

PTTEP make use of functional based agreements with vendors by focusing only on the output/function delivered from the vendors. PTT focuses only on the quality/output of services rather than the working processes. PTTEP as a client is not responsible for FM blue collar workers, who provide FM services at the operational level such as reception, security, concierge services, security guard, cleaning, document and mail services. However, at PTTEP information security is the top priority issue covering, physical, data and information aspects.

Examples of data and information security policies are no printers in the common area preventing visitors printing out documents without permission, centralized control printer system, transparent meeting rooms and prohibit photography within the building. Examples of physical security policies are such as destination-based elevators, private reception and security guard, private concierge services who escort guests from the elevator to the appointed host and after the meeting, a host has to escort a visitor to the control area, visitors access only the visitor dedicated area, all meeting rooms are located in the visitor area floor, and there are separate elevators for PTTEP employees and visitors.

PTTEP's primary activities require trusted and skilled FM workers - especially blue collar workers. Thus, FM blue collar workers are also considered as a part of PTTEP's day-to-day operations because they are allowed to access all areas equivalent with PTTEP's employees. However, the challenge is a high rate of FM staff turnover occurring because the FM blue collar job is only routine job tasks, low pay and fringe benefits, and unstable position. This causes PTTEP problems, because PTTEP must have the most trusted employee working for its organization at all level.



Figure 1: An interior and floor plan of a PTTEP headquarter office in Bangkok, Thailand

In order to decrease the churn rate of FM employees a need to attract and retain trusted and skilled workers and increase employee loyalty, the FM department initiated the collaboration with PTT's HR and service providers to increase the fringe benefits above average for FM blue collar workers. The fringe benefit package included family health insurance (dependent, spouse, parents), kid education, housing mortgage aid programme and retirement plan.

PTTEP subsidizes the financial aid (in a fringe benefit) to FM blue collars through FM service providers who are the legal employer. As mentioned earlier PTTEP has a functional based procurement contract with services providers; PTTEP is not responsible for workforce and human assets. The reason why PTTEP hires the FM staff by itself is that PTTEP does not have professional skills and training. It would be better off to contract out the professional entities. In cases of contractor termination and vendor switching PTTEP still hires the same FM staffs but selects the new service providers to supervise them on a regular basis. With this HR policy PTTEP can retain the trusted and skilled FM blue collar workers with greater employees loyalty. It also increases the PTT reputation as one of the most attractive workplaces in Thailand. The average working duration of an FM blue collar is around 7-15 years.

DISCUSSION

Based on the case presentation above the internal collaboration among PTT's FM with HR and service providers initiate an IO-CSR practice focusing on their internal stakeholder, FM blue collar workers. The PTTEP's CSR practice can be generalized into the concept of IO-CSR practice as shown in Table 2 below. The implementation of CSR within the FM value chain generates social impacts to internal stakeholders in a measurable way for benefits of receivers and PTTEP. CSR activities are created from FM expertise and core competency.

The CSR issue increasingly draws the attention of FM academia and practitioners. In contrast the existing focal point of CSR practices in FM is focused on externally organizational value chain. Mostly, it is responsive from end users emphasizing on the key environmental objectives, for example, energy consumption, waste minimization and recycling, and reduction of climate change emissions (Nousiainen and

Junnila, 2008). On the other hand, Carder (2006) contends that there is a wider role for facilities managers; the FM contribution to CSR is often seen to be enclosed in its role only for reducing environmental aspects, improving energy performance and reducing waste. Other opportunities are disregarded, for instance, the well being of end users or FM staff in term of work-life balance, but such issues could be possibilities for a CSR agenda in the FM context. Companies need their employees to be strong advocates of CSR strategy, employment policies and product. If FM staff is valued, they will be more motivated and committed to delivering a good service to customers (Carder, 2006).

FM is categorized as a middle management level that translates strategic needs into practice and provides effective and efficient support from the day-to-day operational level. This FM advantage sought out not only monitoring the CSR practice for the corporation as a whole but also generating CSR from its process and activities (Napper, 2003 as cited in Walker, D et. al., (2007)). By doing this, FM basically has to have a basic understanding of the value chain of FM and the firm's core business activities. FM can take this advantage to investigate points of intersection between its value chain and the firm's value chain (Waheed and Fernie, 2009). FM possesses the competitive position as IO-CSR champion because although the CSR agenda is decided by a top down approach with decision from top senior management, most of CSR initiatives are driven from the middle management level, such as departments like human resources (HR), information technology (IT) (Jerkin, 2009).

The PTTEP case shows that CSR practice on HR activities, including those improving employee attitudes on workplace quality, can thus assist in creating a competitive advantage by developing a trusted and skilled workforce and workers that effectively reinforce the firm's business strategy, leading to improved financial performance (Ballou et al, 2003; Fulmer et al., 2003; Wright et al., 2001 as cited in Branco and Rodrigues, 2006). This is in line with Branco and Rodrigues, 2006, they assert that effective HR management can cut costs and enhance employee's productivity. In effect, CSR can have positive effects on employee's motivation and morale as well as on their commitment and loyalty to the firm. Socially responsible employment practices such as: fair wages, a clean and safe working environment, training opportunities, health and education benefits for workers and their families, provision of childcare facilities, flexible work hours and job sharing, can bring direct benefits to a firm by increased morale and productivity while reducing absenteeism and staff turnover. As well as productivity benefits, firms also save on costs for recruitment and training of new employees. Improved social performance through its environmental component, may lead to more efficient processes, improvements in productivity, lower costs of compliance and new market opportunities (Branco and Rodrigues, 2006).

Table 2: Analysis of PTTEP's CSR practice

Dimension	PTTEP's CSR practices
Scope of analysis	Corporate level
Value chain	FM value chain

Primary stakeholder/ Recipient	FM blue collar worker (internal stakeholder)
Impact	FM blue collar workers obtain from extra fringe benefits (internal organization)
	Attract new employees (external organization)
	Enhance PTTEP corporate reputation (external organization)
Return on CSR practice	Increase morale and productivity (non financial)
	Reduce absenteeism and staff turnover (non financial)
Partnership	Human resource (HR) and service provider
Centrality	High
Specificity	High
Investment cost	Relatively high and long term investment

CONCLUSION

Generally an FM function is classified as a support function of the host organization and CSR in FM is not directly ranked as FM 's primary task and responsibility. Thus, there is no practical or explicit managerial tool or framework for FM to implement and measure CSR performance systematically. This paper offers the concept of CSR implementation within organizations and scaling down the scope of analysis from external to internal organization. CSR activity that engages with FM's practice and competency can add social value to the PTTEP organization. PTTEP practices exemplify how this proposed concept can be executed in practice. The exemplary case of Thai CSR practices can be applicable to various contexts and organizational settings because a shortage of skilled blue collar workers is a common shared problem among multinational corporations. For further development this concept needs to be tested with wider industrial context and larger number of case studies.

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FM shared services: an emerging concept of FM provision arrangement

ABSTRACT

Purpose: To present the use of shared services in facilities management (FM) from four exemplary case studies. The concept of shared services has been widely used in the provision of organizational support functions for instance finance, IT and HRM. A shared services concept aims to maximize the advantages of centralized and decentralized approaches for service delivering while minimizing disadvantages of both.

Design/ Methodology/ Approach: Semi-structured interviews and qualitative document analysis were used to investigate how the concept of FM shared services is being used in case studies. Interviews were conducted with facilities managers at strategic, tactical and operational levels.

Findings: The benefits gained from FM shared services practices can be service standardization, consolidation of redundant functions across the multiple business units, economies of scale and scope, reduction of the hierarchical information processes and transaction cost reduction. The results indicate that all business units are required to collaborate and exchange their knowledge and expertise among each other. To foster an effective sharing environment, an organization needs to redesign its organizational structure and reinvent its managerial mindset and practices.

Research implication/ Limitation: Since this research shows only the initial phase of FM shared services implementation, the unexpected impacts and consequences would not be fully revealed. This paper highlights the needs for further research and analysis of issues relating to FM shared services in both public and private sectors.

Practical implication: FM shared services can be seen as the emerging sourcing arrangement in FM organizational structures. The new knowledge and expertise management are the key success factors for obtaining the benefits from this new organizational model.

Originality/ Value: There is an absence of FM literature on the sourcing arrangement in shared services concept. This paper sets out the new insights for FM practitioners and academia, not previously reported.

Keywords: Shared service, Sourcing arrangement, Organizational design, Facilities management

Paper type: Research paper

INTRODUCTION

How the facilities management (FM) provision should be arranged has been an open-ended discussion swing between two beliefs: in-house and outsource? In general, the decision is dependent on top management's view of the function (Baily, et al., 1994, p.43; van Weele, 1994, p.179) with the more strategic perception of the function, the more likely it will be located close to the corporate core, in-house, and the more operationally it is perceived, the more likely it will be located in decentralized business units, outsource (van Weele, 1994, p.179).

These two managerial decisions have trade-off between the relative advantage and disadvantage. This paper introduces an emerging concept of organizing FM service provisioning structure, as so-called shared services. Shared services aim to maximize the advantages of centralized and decentralized approaches for service delivering while minimizing disadvantages of both. Shared services have been widely practiced in private enterprises and public government sector in administrative functions of an organization for instance information technology (IT), human resource management (HRM) and finance since the late 1980s. In practice, this concept has been recently implemented in FM practice. The term shared services can be broadly defined as a "bundling of supporting processes and non- strategic activities" into a separate organization or entity which in turn treats these processes and activities as its core business (Schulman et al., 1992). Shared services can be a source of added value by service standardization, consolidation of common functions across the multiple organizations, economies of scale and scope, reduction of the redundant information processes and transaction cost reduction (Ulbrich, 2006). One reason is that support processes – that often have been neglected by managers at an earlier stage – have potential for extensive improvements (Kagelmann, 2000; Schulman et al., 1999). By cutting out duplicate support processes and non-strategic activities, and organizing them, a tremendous theoretical potential exists for optimization and extensive economies. Finally, implementing shared services helps to create a platform for business growth, flatten organizational structure, and support of general group strategy (Ulbrich, 2006). At that time, shared services were usually established within accounting/finance (Ulbrich, 2006), but could also include other core staff functions, such as corporate affairs, facilities, human resources, information technology, and legal services.

There is, however, inadequate knowledge and clear understanding of the concept and distinctions with other similar sourcing arrangements such as outsourcing. This paper thus, addresses to set out the new insights for FM practitioners and academia, not previously reported. This paper commences by discussion a concept of shared service, motive of implementation and prior shared service center models from shared service-related literatures. The following section presents practices of shared services in FM from four organizations. The final section is a discussion of FM current practices and further development.

SHARED SERVICE CENTER (SSC): AN INTERNAL OUTSOURCING

The definition of shared service center (SSC) has no consensus agreement, rather sharing the common objective that shared service center aims at optimizing corporate resources and processes in a new organizational entity (Ulbrich, 2006) while distinguishing with the traditional outsourcing concepts (Schulz et al., 2009). This section investigates the wide variety definitions and characteristics of SSC.

Schulman et al. (1999) defines shared service arrangements as:

...a bundling of supporting processes and non-strategic activities into a separate organization or entity which in turn treats these processes and activities as its core business.

McLemor (1997) further adds:

...shared services, commonly described as a form of internal outsourcing, is enabling organization to achieve certain economies of scale by creating a separate entity within the corporation to perform specified internal services. By consolidating specific operations in one location and concentrating the processes, while at the same time developing a strong customer service orientation, a shared services center can provide higher-quality services at a lower cost.

In line with this Strikwerda (2006) points out that SSC provides service internally:

...a shared service center is an accountable entity in the internal organization of a firm tasked to provide specialized services to operational entities (divisions, business units) on basis of a service level agreement and full charge out of costs on basis of a transfer price system.

Ulbrich (2006) concludes as:

...shared services gather a selection of common and well-defined services to provide these services to an organization's units, acting independently. This is somewhat similar to outsourcing, where the provider of such services is contracted. Usually, an independent third party without direct connection to the outsourcing organization takes over support processes.

Schulz et al. (2009) derive the SSC's characteristics as following:

.. SSC is an organizational concept with the following attributes: consolidation of processes within the group in order to reduce redundancies, delivers support processes as its core competency, is a separate organizational unit within the group, is aligned with external customers, cost cutting is a major driver for implementation, has a clear focus on internal customers and is operated like a business.

Janssen and Joha (2006) conceptualize SSC as a business model and posited as a cost center:

...The SSC is a business model in which selected government functions are concentrated into a semi-autonomous business unit with management structures that promote efficiency, value generation, and cost savings in a manner akin to companies competing in an open market.

...A shared service center is an (engineered) cost center; it is not a profit center (although it has to contribute to the profit of the firm in a measurable way). A shared service center may do many things, except two. It will not perform statutory tasks nor will it develop policies. Shared service centers are operations, with defined, measurable outputs.

To delineate the definition of FM- SSC in this research, FM- SSC is an organizational form by bundling of selections of FM provision and services, such as CREM, workplace management, facility service to facility operation and maintenance, into a single entity to perform FM support service mainly for internal clients within its organization. The aim of implementing a FM-SSC practice is to achieve the benefits of economies of scale and scope, and standardizing facilities service provision, quality and process.

MOTIVES

The motive for initiating SSC can be distinguished into four categorized as follows:

Economic motives: cost reduction is the main motive to establish SSC by obtaining the economies of scale and scope, reducing overcapacity by consolidation, lower control and maintenance costs, accountability of control, control of costs and better cost predictability, Maatman et al. (2010). Maatman et al (2010) suggest that shared services realize economies of scale, and thereby gain efficiencies that are normally reserved to centralized organizations.

Strategic and organizational motives: SSC combines the benefits of centralization and decentralization by performing the standardization process while quickly responding to needs and requirements. Maatman et al. (2010) conclude that the standardization processes create the clear control of focus, disseminating and imposing successful practices, focusing on core business, gaining access to high quality services and skills, sharing risks and rewards, speedy response to needs or quick decision-making, increasing productivity, professionalizing service delivery and reducing complexity/uncertainty. In parallel with Forst (2001) and Norling (2001) assert that the service and process response time can be minimized by putting the customer in focus.

Technical motives: SSC enables a single business unit to access cutting-edge technology, increases the flexibility of technological uses by sharing cost and investment with other business units. Moreover, SSC standardizes technological platforms, expertise, information security and authorization (Maatman et al. 2010).

Political motives: By reducing the redundancy of functions, SSC optimizes the complicated hierarchical control, enhance credibility and solve internal conflicts (Maatman et al. 2010). Connell (1996) suggests that SSC accumulates intellectual and capital assets in a single organizational unit has the advantage of having a large number of experts on hand to deal with complex issues, which often is not possible in small organizations . Because shared services target a larger group within the corporation, they can afford specialists in their specific fields and offer their services to the business units (Shah, 1998; Norling, 2001).

In summary, an initial motive for implementing shared service concept comes from maximizing the advantages of in-house and outsource methods. Janssen and Joha, (2006) conclude that shared services should ideally combine the advantages of two approaches, the advantages of a centralized structure and a decentralized structure. This should result in economies of scale and scope, and standardization on the one hand, and in a flexible and effective alignment of support functions such as IT with the needs of the business on the other hand. Additionally, synergy and mutual learning will increase, while SSCs also provide a clear management focus.

PRIOR CLASSIFICATIONS OF SHARED SERVICE CENTER MODELS

The decision of how to organize SSC is a matter of choice. There are a number of shared service-related seminal works on how SSC should be structured, organized and managed. For example,

Quinn et al.(2000) classify shared service center models from the accessibility from the external market outside its organization : (1) the basic model, consolidated transactional activities to achieve economies of scale; (2) the market place, adding professional expertise centers to transactional activities; (3) the advanced marketplace model, where the center is considered to be a commercial enterprise, possibly providing services to external customers; and (4) the independent business model, in which shared service center is arranged as a separate business entity, a spin-off from the mother company.

Strikwerda (2004) identifies shared service center models from the form of co-ordination between shared service center and other business units: (1) internal joint venture, it set out between different business units, where resources are pooled to provide a single-location service; (2) separate business unit, the SSC could be responsible to the board as all other business units; (3) being a part of the corporate center, it is a more centralized approach alongside the headquarter; (4) being completely independent run by an external party, selling its services to the external organization .

Dollery et al. (2010) classify a typology of SSC in public sector by managerial control: (1) Vertical shared service model, SSC is an entity wholly owned and controlled by its State member councils; (2) Horizontal shared service model, SSC is fully own by member local councils that commonly share resources, service and facilities involved; (3) Intergovernmental contracting shared service model, local councils voluntarily carry out specific tasks on behalf of State or federal government on an ad hoc basis.

Walsh et al. (2008) categorize SSC in the non-profit sector by organizational design: (1) Classical business model, organization establishes a separate shared service entity which brings together the business functions previously performed by separate business units within the organization. (2) Dedicated shared service centers, SSC is established as a separate organization or entity that is sub-contracted to perform specific business functions. (3) Peak body support model, a particular sector or industry provides a range of services for its fee on an ad hoc basis. (4) Co-location model, number of organizations share common premises and common resources and facilities such as secretarial service, photocopying, joint insurance etc. It can be sub- categorized into (4) co-governance where one member from each of co-governing agencies

formed the shared services management committee and (5) co-location where members from each department are co-located in other organizations participating in a shared services arrangement. (6) Amalgamation or merger model, organizations in a similar field of service amalgamates with each other to form a single larger organization and, as a result, consolidate and streamline their administrative functions.

Schulz et al. (2009) group SSC in a private sector by the specific purpose of SSC: (1) Disguised central department, SSC is run and managed as a pure cost center where cost efficiency is the main goal. (2) Preferred provider, SSC is managed according to the concept of investment center where SSC has a much stronger strategic focus by pro-actively creating capabilities for business and support the current business strategies. However, maximizing gains is not its main responsibility but rather the optimum support of business units measured by service quality and customer satisfaction, so-called service center. (3) Competitive SSCs, SSC is arranged as a profit center by generating long term profits for the corporations.

Maatman et al. (2010) classified HRM shared service by positions of the SSC: (1) extension of the HRM staff department: a service provider is positioned as a central service, equivalent business functions are often removed from business units and relocated at the service providers. (2) As an infrastructure: the business units are free to use or not use the service provided, a new business unit is created which operates in the same way as other business units. (3) Within one of the business units: the service provider is controlled by the business unit in which it is integrated, and therefore the remaining business units are dependent on the motives of this business unit. (4) The internal joint venture: SSC becomes an internal joint venture when one or more activities are divested to a common operational entity covering all the business units.

Janssen (2005) depicts a classification of SSC by form of SSC: (1) central department, (2) internal joint venture, (3) infrastructure facilities for multiple business units (BU), (4) a center within one BU, (5) service firm, which is similar to outsourcing arrangements and (6) joint venture with an outsourcing vendor.

In summary, the criteria for classifying SSC are accessibility from the external market outside its organization, form of co-ordination between shared service center and other business units, managerial control, organizational design, specific purpose of SSC, positions of the service provider and organization form of SSC. This research uses these classification criteria as a framework analysis for case studies in the following section.

PRESENTATION OF CASE STUDIES

This research was conducted with four selected case studies which can exemplify different types of FM shared services practices. Table 1 presents the short overview of the characteristic of the case study organizations. The data collection was carried out by semi-structured interview with FM-related managers. The interview duration took approximately 1.5- 2 hours per interview appointment. The main interview theme focused on an aligning of perception from demand side and implementation from supply side on added value of FM for instance: value added from FM service and provision to core business and surroundings, the relationship and involvement between FM organization and its internal stakeholders such as client, other

business units, external service providers and end users and FM provision arrangement strategy. All of the organizations do not verbally admit that they implements FM-SSC but they heuristically adopted and practiced the concept of shared services.

Table 1 Case studies overview

Case information	Case			
	PTT	THAI	DUTCH	HKSTP
Country	Thailand	Thailand	Netherlands	Hong Kong
Core business	Energy company	Facilities hub for other governmental departments	Facilities hub for other governmental departments	Facilities hub for technological corporations and start-up companies
Sector	State-owned	Public sector	Public sector	State-owned
No. of end users	>10,000	>8,000	>10,000	>8,000
Number of interviews	6	4	3	2
Interviewee's managerial levels	Strategic, tactical, operational	Strategic and tactical	Tactical, operational	Tactical, operational

ENCO: semi-autonomous Company within the big company

PTT is a Thai state-owned energy company. Previously, subsidiary companies of PTT 's host organization rented office spaces separately around Bangkok and contracted out FM services individually. In order to consolidate the redundancy of workplace and FM practices among its subsidiary companies and to reduce the FM operating and administrative costs, ENCO was established as a semi-autonomous company responsible for managing FM service and provision for the new office campus. ENCO is perceived as the profit center by charging rental and FM service and operating fees from 26 of PTT's subsidiary companies at the markets price. ENCO provides FM products only for the common areas but excluding each tenant workplace because each of them has a wide-range and diversity of tenant's FM requirements and specifications. They preferably manage their own space and FM services. Clients of ENCO are the internal client within the new office campus. This office campus is intended to be the multi-tenants office for subsidiaries companies by sharing the common area such as reception, parking area, canteen, including common FM services for example, security, cleaning, catering. PTT can benefit from economies of scope and scale of shared service. At an initial phase of organization establishment, there is a shortage of FM knowledge, expertise and workforces, ENCO heavily relies on the FM professional skills both managerial

expertise and technical skills from its main service provider; CBRE. Although CBRE does not provide the highly complex and customization knowledge to ENCO, in the current, ENCO still needs to employ FM knowledge and expertise from CBRE before ENCO can create and establish its own. The standardization and consolidation FM product among different PTT's subsidiaries FM practices and locations can be seen as a one-off value added to PTT. PTT can eliminate the redundancy of FM service and reduce the operating and administrative cost. ENCO does not provide the one of kind FM services which is highly customized to PTT but rather contributes the new FM provision arrangement that adds value to the PTT's core business.

THAI central government: Centralized office campus

THAI central government established Dhanarak Asset Development (DAD) as the independent subsidiary company of Thai central government for managing FM provision and service including space acquisition for this government office complex. Previously 35 state agencies rented and leased their workplaces spreading over Bangkok greater area. Thai central government then initiated an office campus project as a state property management project that creates a new dimension of public administration by offering sufficient working space to government agencies at the right budget. Each of the governmental business units served as a primary tenant shares FM products in the common areas. Each tenant is the governmental business units individually managing its space and FM products but the common area are managed by DAD. DAD is established as a profit center by charging the rental and FM operating fees from its tenants with the market price. Each public department from different locations shares the common area and related FM products in order to minimize the redundancy of workplace and FM products among its public departments. DAD provides the standardized FM product in the common area such as security, cleaning service, reception, gardening, landscaping and parking area. DAD can increase the power of negotiation with FM services and suppliers by consolidating FM products into shared FM products. Shared services can be a source of added value by standardization of FM product, consolidation of common functions across the multiple organizations, reduction of the redundant administrative information processes and transaction cost reduction. Cost reduction is the main motive to establish shared services by obtaining the economies of scale, reducing overcapacity among Thai governmental business units by consolidation, lower control and maintenance costs, accountability of control, control of costs and better cost predictability. This governmental office project creates the organizational capacities and capabilities by consolidating the de-centralized office buildings from multi –office locations into one single office campus. As mentioned governmental business units can share standardized FM products in the common areas. DAD does not provide the cutting –edge FM product to its tenants but the main FM product delivering from DAD is the strategically central office campus. Due to an entire organizational change, executing shared service demands the high switching and start- up cost. But the collaborative relationship between DAD and governmental business units is not closely engagement in the organizational structure because each of the tenants manages and arranges its own FM products. They only share mutual agreement about shared FM services on the common areas. Moreover, when consolidating the duplicated FM functions from the existing organizations, an organization inevitably has to confront with job cutting and employee lay off issues. The shared FM product and location combine

the benefits of centralization and decentralization by performing standardization of FM services and practices while FM organization can quickly respond to tenant's needs and requirements.

DUTCH central government: Cutting the cost by sharing FM provision and services

During financial crisis, the Dutch central government has to reduce operating cost and labor workforces among thirteen government departments. Each of them has its own FM organization and provision arrangement and practices. It causes the redundancy and non-standardization of FM products and practices among each DUTCH state agency. In order to reduce the operating costs, leverage the working standard and standardize work practice the Dutch central government commenced the organizational merger and consolidation from thirteen business units into one standard format. FM as a support function from each public department was amalgamated into one single department and reports directly to the central department. The new merged FM organization aims to manage and supervise FM service and service providers. This initiative can be seen as the FM shared services organization by consolidating the support functions and non-strategic activities such as FM into a separated entity. A new established FM organization can be a source of added value by service standardization, consolidation of common functions across the multiple organizations, economies of scale and scope, reduction of the redundant information processes and transaction cost reduction. The aim of consolidation FM products in the Dutch central government is to achieve the benefits of economies of scale and scope by standardizing FM service provision, quality and process into single entity. The Dutch central government can reduce the operating and administrative cost by obtaining the economies of scale, reducing overcapacity by consolidation, lower control and maintenance costs, accountability of control, control of costs and better cost predictability. The shared service among thirteen governmental business units combines the benefits of centralization and decentralization by performing the standardization process while quickly responding to needs and requirements. This FM provision arrangement enables the Dutch central government to access cutting-edge technology, increases the flexibility of technological uses by sharing cost and investment with thirteen business units. Moreover, shared service standardizes technological platforms, expertise, information security and authorization. The characteristics of FM product's Dutch central government is the standardized and stripped down FM. The scope of FM products covers space acquisition, facilities management and asset management for all public departments. But the added value from FM product is about the novelty of FM provision arrangement involving organizational and business process re-design. The consolidation and standardization is an organization form by bundling of selections of FM provision and services, such as CREM, workplace management, facility service to facility operation and maintenance. FM organization as an organizational support function is the main driver to assist Dutch central government cutting the redundancy FM cost of operating and administration. In order to standardize thirteen FM organizations with different FM practices and standards into one single entity, each of them has to collaborate and exchange its own FM knowledge and expertise. This organizational change process requires high degree of collaboration and involvement from each business unit. This initiative creates value to the Dutch central government by getting the benefit

from economies of scope and scale. The Dutch central government also can increase the power of negotiation with FM suppliers and service provider.

Hong Kong science and technology parks (HKSTP): Aligning internal knowledge with external knowhow

Hong Kong Science and Technology Parks Corporation (HKSTP) is a state-owned organization that mainly provides workplace and laboratory facility for technology-oriented start-up companies and multinational corporations. This project aims to provide the world class technology support and laboratory service within dynamic environment that enable start-up companies to nurture ideas, innovation development. It also aims to foster innovation and technology advancement in Hong Kong, through the provision of state-of-the-art FM service and production facility by promoting development of five technology clusters, specifically Electronics, Information Technology and Telecommunications, Precision Engineering, Biotechnology and Green Technology. HKSTP manages Hong Kong Science Park, InnoCentre and three Industrial Estates and provides purpose-built R&D office spaces, advanced laboratories and technical support services to technology companies. To provide the world-class infrastructure and services for Hong Kong to become a regional hub of innovation and technology, HKSTP provides facilities, services and a dynamic environment that enable companies to nurture ideas, innovate and develop. It includes leading-edge office, laboratories and production facilities that ensure scientists, technologists, entrepreneurs and enterprises to save development costs and time to market. There are approximately 8,000 end users and 400 tenants sharing the central infrastructure and FM service such as parking area, canteen, reception area, security service, gardening and outdoor space. The FM organization aims to engage its FM services and activities into the operation of each tenant's primary activity because technology-savvy tenants demand the most reliable FM services and provisions to ensure their operations and activities.. In order to manage and organize the world class facility hub, a FM organization in collaboration with a service provider (ISS) initiated a facilities manager trainee program that aims to develop and cultivate the role model of FM practitioners who have the appropriate FM knowledge ranging from technical skill to managerial skill. The highest reliability of FM product is the basic requirement in such technological and scientific company like HKSTP because it may damage the operation of the tenant's core business. HKSTP can also benefit from economies of scope and scale by contracting out FM tasks to the skilled and capable FM service provider as ISS to provide FM service and workforce. The FM organization is the mediator between an external service vendor who is capable of FM expertise and an internal demand side. The FM organization attempts to be engaged in the tenant's activities in order to bridge the internal needs from end users and tenants with the external FM service provider's skill and expertise. The liaison between external FM suppliers and internal FM demands would be the main challenge of HKSTP's FM. To ensure FM product meeting tenant's needs and requirement, the FM organization should increase the level of collaborative relationship with its demand side for example, tenants and end users.

DISCUSSION OF CASE STUDIES

Table 2 below presents a summary of the characteristics of the different SSC analyzed in four case studies.

Table 2 Analysis of SSCs in four case studies

Criterion	Case			
	PTT	THAI	DUTCH	HKSTP
Motive	Cost reduction	Cost reduction	Cost reduction	Access in cutting-edge technology
	Centralized office location	Centralized office location	Standardizing FM service, practice and quality	Office campus
Organization concept	Profit center	Service center	Cost center	Profit center
FM portfolio	CREM and FM service	CREM and FM service	CREM and FM service	CREM and FM service
Organization design	Co-location	Co-location	Amalgamation/merger model	Co-location
Legal form	Independent subsidiary	Independent subsidiary	Central department	Independent subsidiary
Form of coordination	Mixed-coordination	Mixed-coordination	Mainly hierarchical	Mixed-coordination
Market outside of organization	No access	No access	No access	Open access
Contractual form	Informal	Informal	Formal	Informal
Service charge	Market price	Market price	Allocation	Market price

The existing organizations such as DUTCH, THAI and PTT use shared services as correction manner by consolidating the redundancy of FM service and workplace among organizational business units. This assists to reduce the FM operating and administrative costs, to standardize the quality and practices. When organizations consolidate their FM from several organizations into one single entity, it can increase the power of negotiation with service providers and access to cutting-edge technologies. Organizations gain the benefit from economies of scope and scale. But the new organization such as HKSTP uses FM shared services to attract and promote start-up companies by aligning the specific needs and requirements from tenant and end users with the standardized FM services from service providers by established facilities managers who is liaison between internal demand and external FM suppliers. The implementation of DUTCH's shared service is the organizational re-design and structuring by not only consolidating 13 FM

departments of governmental agencies into single entity but also amalgamating 13 governmental agency units into 8 units. Thus it requires greater collaborative relationship more than THAI and ENCO that solely share the communal FM products and FM performances. FM shared services can be implemented within their organizational business units and from different companies. DUTCH, THAI and PTT are examples of implementing FM shared service among their organizational business units. HKSTP is an example of implementing FM shared service among different companies by sharing common service and office location.

The coordination between FM organization and its tenant of PTT, THAI and HKSTP is mixed co-ordination where demand and supply sides mutually share information transferring and FM organizations engage at the operational and tactical levels in order to align FM working processes with the client organization's primary activities. The coordination of DUTCH is mainly hierarchical, where input/ output transferring from a client to the FM providers takes place in a top-down manner. An informal contractual form as seen in PTT, THAI and HKSTP is an contractual exchange between both entities that has non-binding agreement. The involvement of the FM organization is only at the operational level. A formal contractual form as seen in DUTCH is a binding contractual agreement that is centrally initiated from strategic level.

CONCLUSION

Recently, FM organizations are increasingly adopting a shared service practice as a new way of sourcing arrangement that aims to improve cost and service performances. This concept requires not only FM organization to embrace the practice but also the entire organization to apply the form of organization model. This paper sets out the new insights for FM practitioners and academia, not previously reported. The concept of shared service is the emerging concept of FM sourcing arrangement which aims to maximize advantages of in-house and outsource, and minimize disadvantages of both approaches. In this research in progress, the preliminary results reveal that shared center can be seen as a tool for adding and creating value to the organization. While the main purpose of implementing shared service concept is being cost effective by reducing the operating cost and eliminating the duplicate FM functions, SSC improves and standardizes the FM provisions and service qualities. It allows the host organization focusing on its primary activities with the effective and efficient FM support service/ provision. There is no one model that fits all SSC implementations but how SSC should be managed and organized is the matter of strategic choices, for instance scope of FM portfolio, cost allocation, the primary client, form of coordination between FM-SSC with each business unit, form of SSC organization. Wang and Wang (2007) assert that the shared services require significant transformation of organizations and the new managerial mindset. The challenge part is how an organization handles and manages this change from process reengineering, process consolidation, and process improvement. Due to an entire organizational change, executing SSC demands high switching and startup cost. Moreover, when consolidating the duplicated FM functions from the existing organizations, an organization inevitably has to confront with job cutting and employee lay off issues. The effective shared service practices require a whole organizational reengineering. It impacts on the strategic changes from an organizational level such as organization structures, legal form, form of co- ordination, external market, contractual form, center concept, a departmental level such as service charges, and product/ service

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This dissertation is a research based contribution to the on-going professional discussion among researchers and practitioners within Facilities Management (FM) about whether and why FM organizations should be established with a managerial position which can act as a corporate strategic player. It is argued that being strategic is not the pre-requisite condition to add value to the core business and stakeholders but rather matching what does FM organization offer – so called FM product – with how does it being offered – so called FM process? By matching FM products with the right FM process, FM organizations can best add value.

Based on comprehensive literature studies and 7 case studies of private and public organisations from Denmark, Holland, Hong Kong and Thailand, the dissertation analyses, how FM organizations can best create added value. The research unfolds the unarticulated notions of added value from FM organization and activities. It will broaden the managerial perception and discussion on FM provision's abilities and capabilities. The results are besides the field of FM also of relevance for management of other service industries and functions.

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